BOSTON PUBLIC LIBRARY
3 9999 09020 244 9

GOVERNMENT DOCUMENTS
DEPARTMENT
BOSTON PUBLIC LIBRARY

BMA-0503

REVISED
COPLEY PLACE RETAIL IMPACT ANALYSIS
Boston, Massachusetts

PREPARED FOR

Boston Redevelopment Authority

Larry Smith & Company, Ltd.

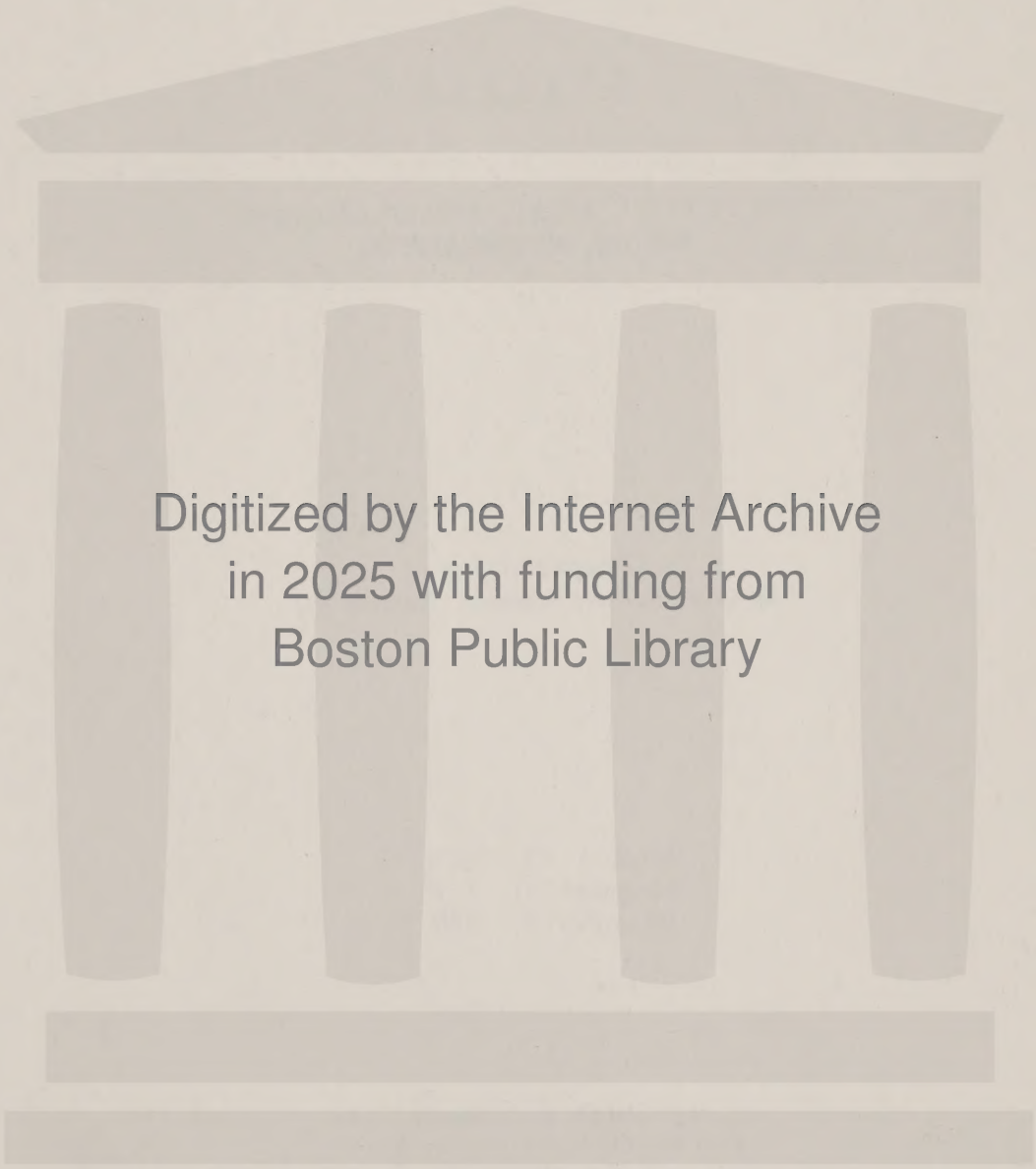
REVISED

COPLEY PLACE RETAIL IMPACT ANALYSIS
BOSTON, MASSACHUSETTS

Prepared for
Boston Redevelopment Authority

October 29, 1979
December 21, 1979
January 10, 1980

Larry Smith & Company, Ltd.
230 North Washington Street
Investment Bldg., Suite 402
Rockville, Maryland 20850


Digitized by the Internet Archive
in 2025 with funding from
Boston Public Library

https://archive.org/details/copleyplaceretai00bost

TABLE OF CONTENTS

INTRODUCTION		i
SUMMARY AND CONCLUSIONS		viii
SECTION I	COPLEY PLACE: THE CONCEPT	1
SECTION II	COPLEY PLACE RETAIL SALES	8
SECTION III	COPLEY PLACE AND THE BACK BAY	24
SECTION IV	COPLEY PLACE IMPACT ON SOUTH END RETAIL	36
ADDENDUM	EMPLOYMENT GOAL IMPACT	41
ADDENDUM II		43

1/10/80

TABLES

TABLE 1-1	COPLEY PLACE: PROGRAM ALTERNATIVES	(2)
TABLE 1-2	COPLEY PLACE - PRELIMINARY - RETAIL MALL SHOP MIX	(3)
TABLE 1-3	COPLEY PLACE RETAIL SALES	(4)
TABLE 1-4	COPLEY PLACE DAILY POPULATION	(6)
TABLE 2-1	BOSTON SMSA POPULATION (000)	9
TABLE 2-2	BOSTON SMSA COUNTIES 1979 MONEY INCOME	(10)
TABLE 2-3	ORIGIN OF SHOPPERS BY LOCATION AT SELECT BOSTON RETAIL FACILITIES	(11)
TABLE 2-4	COPLEY PLACE OFF-SITE SALES BY LOCATION OF ORIGIN	12
TABLE 2-5	OFFICE WORKER SURVEY RESULTS: WHERE DID YOU BUY THE FOLLOWING ITEMS?	(13)
TABLE 2-6	COPLEY PLACE ON-SITE METHODOLOGY	(16)
TABLE 2-7	POINT OF ORIGIN AT SELECT BOSTON RETAIL FACILITIES	(18)
TABLE 2-8	DISTRIBUTION OF COPLEY PLACE SALES BY ORIGIN	(19)
TABLE 2-9	MAJOR RETAIL DEVELOPMENTS BOSTON METROPOLITAN AREA	(20)
TABLE 3-1	DISTRIBUTION OF BACK BAY SALES BY RESIDENCE	(25)
TABLE 3-2	BACK BAY RETAIL SALES METHODOLOGY	25
TABLE 3-3	BACK BAY RETAIL SALES WITHOUT COPLEY PLACE	(26)
TABLE 3-4	1983 COPLEY PLACE SPIN-OFF GENERATION	(27)
TABLE 3-5	COPLEY PLACE RETAIL SALES SPIN-OFF BY ORIGIN TO BACK BAY	(29)
TABLE 3-6	DISTRIBUTION OF COPLEY PLACE SPIN-OFF SALES TO BACK BAY BY STORE TYPE	29
TABLE 3-7	BACK BAY RETAIL SALES WITH COPLEY PLACE (000)	(31)
TABLE 3-8	SAMPLED RENTS FOR RETAIL SPACE IN SELECTED AREAS OF BACK BAY BOSTON	(32)
TABLE 4-1	AVERAGE 1963 DAILY VEHICLE FLOW	(36)
TABLE 4-2	AVERAGE DAILY VEHICULAR TRAFFIC GENERATED BY COPLEY PLACE	(38)
TABLE 4-3	SOUTH END RETAIL SPACE SUPPORTABLE BY COPLEY PLACE PEDESTRIANS, 1985	(40)

INTRODUCTION

This study has been undertaken for the Boston Redevelopment Authority by Larry Smith & Company, Ltd. in accord with a contract dated July 19, 1979 between the Authority and Larry Smith & Company, Ltd.

The overall purpose of the analysis is to assist the Authority in assessing the economic impact of the retail component of the proposed "Copley Place" project on existing retail facilities in the Back Bay and South End. This study is a re-analysis closely related to the study, Copley Place Retail Impact Analysis, prepared by Larry Smith & Company, November 1978. The re-analysis has been required due to changes in the retail mix proposed for Copley Place. The analysis is concerned with only the retail aspects and impacts of Copley Place.

The contractor is obligated to carry out the following services.

1. Consult and advise with various appropriate staff as designated by the Authority's director regarding the work to be performed.

2. Consult with other appropriate parties as mutually deemed necessary.

3. Review available plans, reports, studies, surveys, maps and other relevant documents related to the study area retail trends.

4. Estimate and project retail sales of Copley Place without the expansion of Hynes Auditorium.

5. Evaluate the impact of other identified proposed retail shopping center developments in the regional market on the sales capture and spin-off of Copley Place.

6. Estimate and project retail sales of Back Bay by major store types (in accordance with data available from the Census of Retail Trade) without Copley Place.

7. Estimate and project retail sales of Back Bay by major store types as above with Copley Place.

8. Estimate retail sales spin-off effect of Copley Place on Back Bay by origin of effect and the impact of retail sales.

9. Analyze the impact which Copley Place will have on South End retail development, identifying the most likely location and type of such development.

10. Estimate and project in consultation with the Authority the new population at the project including:
    a. hotel employees and guests
    b. office employees and visitors
    c. housing residents and guests
    d. retail employees

11. Estimate and project the distribution of Copley Place sales by origin, distinguishing between on-site and off-site generated sales.

12. Estimate the composition of off-site generated Copley Place sales by location of origin: Back Bay, Downtown Boston (excluding Back Bay), City of Boston (excluding Downtown), Metropolitan Boston within I-495 divided into North Shore, South Shore and Western Sector (excluding Boston), outside I-495 in New England, outside New England in U.S., outside U.S.

13. Analyze developer's retail leasing plan and assess the attractiveness of Copley development to Back Bay merchants including:

    a. Projection of Back Bay retail rent levels in 1983 and 1985 and Copley Place rent levels.

    b. Assessment of the independence of the markets for the project and for Back Bay stores including types of retail stores and restaurants given response to Items #10 and #12 above and the Authority's Newbury/Boylston survey.

    c. Assessment of the susceptibility of existing Back Bay stores being relocated into the project for any other reason and possible changing mix of Back Bay retail sales given the UIDC leasing plan.

The consultant has made use of as much of the available data provided by the Authority's Research Department as was deemed applicable. Extensive use of this data was necessary, not only to avoid duplication of effort, but in order to meet the time and budget constraints of the contract. These source references are cited in the reference section at the end of this report.

This analysis utilizes the projection of trends as a technique. In the preparation of such analysis, it is necessary to make a number of basic assumptions among which are the following.

1. The published data from various public sources are sufficiently accurate for planning purposes.

2. The economy of the Boston metropolitan area and the nation as a whole will not undergo serious disruptions which will invalidate the trends discernible in the existing data.

3. That the information provided the consultant with regard to the project is sufficiently accurate for purposes of this analysis.

Should there be significant variations from these assumptions, it may be necessary to review and revise the conclusions. Specific assumptions are stated throughout the report at the point of applicability. Dollar values projected in this report are projected in current dollars. The rates of projection are indicated.

Where estimates are indicated, they are made by the consultant unless another source is cited. There are a number of specialized expressions used throughout the report. An attempt has been made to identify these throughout the report but the following definitions should be recognized.

1. SMSA - Standard Metropolitan Statistical Area; an area defined by the Bureau of the Census for the purposes of compiling population and economic data including a central city and the economically integrated surrounding municipalities.

2. GAF - General Merchandise, Apparel and Furniture; these are store types utilized in the Census of Retail Trade. They are a group of stores generally consistent with the description of shopping goods stores.

3. DSTM - Department Store Type Merchandise; this grouping of stores from the Census of Retail Trade includes the GAF stores but also includes a group of other shops which carry merchandise sometimes

carried in department stores as well. The total group covers all the major types of merchandise which are carried in full line department stores.

4. CBD - Central Business District; this is a district of the city defined by the Bureau of the Census and utilized for the compilation of data. The district as defined for the City of Boston is shown on the map facing page 24.

5. Functional level - Retail establishments can be classified by "functional level" on the basis of the extent of the trade area required to support a store unit. Neighborhood level functions are supported by small "neighborhood" trade areas and are represented by food, drug and hardware stores. Community level functions such as a junior department store require a trade area equivalent to three or four neighborhood trade areas. Regional level functions such as a full line department store require trade areas which are the equivalent of three or four community trade areas. Shopping facilities such as are proposed for Copley Place will operate at the regional functional level.

6. Cross Shopping - This term is used to describe the activity of shoppers who visit more than one retail center during the course of a shopping trip.

Because of the detailed nature of the analysis required, there are considerable constraints due to data limitations for small areas such as the "Back Bay" and particularly for specific merchandise lines within these small areas. No comprehensive published sales data exist for the Back Bay area more specifically than "total retail." An effort has been made to correlate existing data but estimates of small fractions of retail sales for small areas represent very generalized estimates. The

scope of the area covered in this analysis, along with the required detail, generates an intricate matrix of estimates. Due to the time limitations on the research and limitations on availability of data, considerable judgment has been utilized in making estimates throughout the report. Care should be exercised in any attempt to utilize this analysis for specific store decisions.

Data constraints have also dictated that two separate delimitations of the Back Bay be used within the study. The first delimitation follows the definition set-forth by the Bureau of the Census and essentially establishes the business district within the Back Bay. This definition is applied in Section III of the report when discussing impacts of Copley Place on the Back Bay. A second delimitation for Back Bay is used in Section II when estimating the share of sales potential generated by the Back Bay. Here, the delimitation of Back Bay is extended and encompasses residential areas as defined within the BRA planning district Back Bay-Beacon Hill-Bay Village. These planning district designations relate to the BRA map, "District Planning Program," D-1115, 1976.

This analysis is directed towards the operation of the retail components of the Copley Place project only. No consideration is given for the sales performance of any of the facilities which might be located within either the hotels or the office buildings.

In estimating the daily population of Copley Place, no attempt has been made to estimate the number of "shoppers." The overlap of employees, visitors, residents and guests causes considerable duplication in these numbers. Because of the wide variation in purchase amounts, types of selling facilities and the number of components of the population, it is judged that an estimate of the number of shoppers could be misleading and highly speculative.

The inclusion of an employment goal of having 50% of the employees of Copley Place be from residents of the City of Boston was brought to the consultant's attention after the completion of the principal study. An evaluation of the impact of accomplishing the goal on the distribution of the origin of Copley Place sales is presented in the Addendum.

SUMMARY AND CONCLUSIONS

This analysis of the retail impact of Copley Place is complex and detailed. Complete explanations of rationale and methodology are presented throughout the text. A summary is presented for convenient review of the major findings.

Retail facilities planned for Copley Place have evolved toward a "specialty center." These centers depend upon the combined attraction of the total retail and recreation function and the ambience of the center to establish and maintain an attractive power and generate shopper traffic.

In 1983 Copley Place with a specialty store of about 104,000 square feet could attract sales on the order of $72 million. About 12.5% of all sales would be generated from the on-site population consisting of employees, residents, and guests while the remainder of sales would originate from off-site sources mostly within the Boston SMSA. The new center should draw most heavily on higher income groups throughout the metropolitan area.

About 85% of the total sales would originate within the SMSA and smaller shares from the remainder of the state, the region, the country and beyond. It is not anticipated that other retail facilities now proposed or planned within the study area would impact adversely on the sales forecast for Copley Place. Measured against the larger area, Copley Place DSTM sales represent 1.6% of the SMSA total, including the specialty store.

The development of Copley Place will add to the variety and scope of retail facilities available in inner-city Boston. Its impact should be positive for the city and for adjacent communities.

Retail sales in Back Bay were reported by the Bureau of the Census at about $93 million in 1972. The addition of new establishments since 1972 helps to create an increase for 1979. It is estimated that for 1979 Back Bay will realize sales of about $163 million.

Business establishments in the Back Bay will benefit from the spin-off generated primarily from the on-site population created by a fully operational and tenanted Copley Place. In 1983 with full development, including the specialty store, spin-off could amount to $14 million. Business categories most likely to be favorably impacted are Eating and Drinking, General Merchandise and Furniture, Home Furnishings, and Equipment.

Leasing requirements at Copley Place are likely to be such that few if any establishments in the Back Bay would relocate to the new facility.

The areal extent of the trade area served by Back Bay stores and which will be served by Copley Place are generally equivalent. Back Bay should continue to penetrate nearby high income groups within the City while Copley Place should extend coverage of the metropolitan market but with relatively shallow market penetration.

It is not foreseen that a fully operational Copley Place will have any discernible impact on the retail facilities in the South End nor is it likely that Copley Place will induce new development. Only along Dartmouth Street near Columbus would the probability exist for new commercial development and the potential for development is very small. No effect on retail rents is likely to be discernible in the South End.

SECTION I

COPLEY PLACE: THE CONCEPT

The proposed Copley Place shopping center is planned to be a climate-controlled, enclosed center. There are two possible development programs for the retail facilities depending on the availability of a "major" store, a specialty department store. A description of the retail component by the developer follows.

> The Copley Place retail component will consist of a four level specialty store of approximately 100,000 S.F. (GLA) located on Dartmouth Street emphasizing frontage on the Dartmouth Street Mall. A three level landscaped glass entry to the mall and offices (at Dartmouth and Stuart Street facing Copley Square) will provide direct visual and physical access from street level to the specialty store as well as an elevated pedestrian connector from Copley Square through the Western Hotel and over Stuart Street to the Specialty store mezzanine floor.
>
> The top two floors of the four levels of specialty stores connect and front directly on the two level mall (elevations 151 and 167). The main mall level is approximately thirty feet above Dartmouth and Huntington Avenues in order to accommodate minimum ramp clearance from the Massachusetts Turnpike.
>
> The two level mall features a nine level glass covered atrium in the center of the retail plate at Elevation 151 with seven levels of office above the two retail levels. A "mini" atrium to the south of the main mall atrium provides an opportunity to develop 50,000 - 60,000 square feet of terraced restaurants and food related retailing. This section of the mall provides a southern exposure and will emphasize exterior views with maximum natural lighting. A full service membership health club will be located above the convention hotel parking and will access from the main mall level. With 15,000 S.F.

TABLE 1-1

COPLEY PLACE: PROGRAM ALTERNATIVES

	Plan A	Plan B	Two Department Stores Dec., 1978 Program (EIR
HOTEL #1 (Western International)	712 Rooms	712 Rooms	868 Rooms
HOTEL #2	960 Rooms	960 Rooms	-
RETAIL (Rentable)			
Specialty or Dept. Store	104,000 S.F.		320,000 S.F.
Mall Shops	197,000 S.F.	120,000 S.F.	340,000 S.F.
Community Retail	8,000 S.F.	8,000 S.F.	
Cinemas	15,000 S.F.	15,000 S.F.	12,600 S.F.
Health Club	35,000 S.F.	35,000 S.F.	-
TOTAL RETAIL	359,000 S.F.	178,000 S.F.	672,600 S.F.
OFFICE (Leasable)	641,000 S.F.	836,000 S.F.	612,000 S.F.
HOUSING	100 D.U.	100 D.U.	100 D.U.

SOURCE: Adapted from UIDC, May 31, 1979 - Attachment to Contract July 19, 1979.

of lobby, grille room, lounge, locker/steam/sauna, and exercise facilities (men and women) on the first level (mall level 151)-- with direct access from office lobbies and both Copley Place hotels, the balance of health club facilities (racquetball, handball, squash, track) will be located above the convention hotel ballroom connected by an elevator to the club lobby/lounge.

Cinemas at Copley Place will consist of approximately 15,000 S.F. adjacent to the convention hotel ballroom with direct access from the mall level to the south atrium area. With an emphasis on diversified restaurants on two or three open levels of retailing, the cinema entry should generate significant evening traffic through the entire mall. Self-parking for approximately 800 cars will be located directly below the main mall level with additional parking within Copley Place provided by valet parking operations at the convention and Western International hotels.*

Copley Place is also proposed to include hotels and office space within its commercial components. The dimension of the project with the current alternatives are shown in Table 1-1 along with the 1978 program.

The exact allocation of space by store type in the retail component, the component which is the primary subject of this analysis, cannot be determined precisely at the stage of project planning which prevails at the time of this analysis. The exact configuration and dimensions of the retail space will be influenced by the character of the specific tenants, tenant availability at the time of leasing, the selection of tenants to provide shopping balance and financial balance in the development of the center as well as the development economics.

* UIDC, letter September 6, 1979.

TABLE 1-2

COPLEY PLACE

PRELIMINARY

RETAIL MALL SHOP MIX
(% of total mall shops)

Category	1979 PROGRAM		1978[2] Program
	Plan A[1]	Plan B[1]	
	%	%	%
Apparel	37	25	36-40
Footwear	5	6	6
Accessories	10	10	10-13
Jewelry	6	6	3
Home Furnishings	10	22	10
Gifts	8	10	9
Restaurants & Entertainment	18	15	8-15
Services	6	6	11

1) Urban Investment and Development Co., 8/20/79.
2) UIDC, 11/78.

Measured against the cost of providing shopping center facilities on the surface in suburban locations, the cost of providing facilities in the Copley Place project will be relatively expensive. This cost of producing the facilities will also be reflected in relatively high rent requirements, which will tend to limit the potential tenants to the types of stores with a high sales productivity per square foot and require a high efficiency of space use. The allocation of mall space within the project is indicated in Table 1-2.

The Copley Place rent schedule by store type as perceived by the developer at this stage of planning is shown below. The amounts shown are "guaranteed minimum" rents to which will be added the other costs that are "passed through" to the tenants. It is anticipated that at least taxes of about $3.00 per square foot and Common Area charges of about $3.50 per square foot will be added to the minimum rents. Because the projected Copley Place rents are cited by store type and have a complex structure, including a percent of sales element, they are not directly comparable with general rents quoted for areas of Back Bay in later sections.

	Copley Place 1985 Stabilized*	
Store Type	Guaranteed Min. Rents Per Sq. Ft.	Total Rent Incl. Other Charges and Passthrough Per Sq. Ft.
Specialty Store	$ 6.50	$13.00
Mall Stores	17.00	23.50
Community Retail	8.00	14.50
Cinemas	8.00	14.50
Sports	8.00	14.50
Storage	5.00	11.50

Source: UIDC, letter September 6, 1979.
*Project fully tenanted.

TABLE 1-3

COPLEY PLACE RETAIL SALES

	1983		1985		1990		1995	
	Plan A[1] (000)	Plan B[2] (000)	Plan A[1] (000)	Plan B[2] (000)	Plan A[1] (000)	Plan B[2] (000)	Plan[1] (000)	Plan B[2] (000)
Specialty Store	$13,493		$14,843		$18,994		$24,184	
Mall Shops								
Apparel	$18,192	$ 7,500	$20,084	$ 8,280	$25,614	$10,560	$32,672	$13,470
Footwear	$ 2,458	$ 1,800	$ 2,714	$ 1,987	$ 3,461	$ 2,534	$ 4,415	$ 3,233
Accessories	$ 4,917	$ 3,000	$ 5,428	$ 3,312	$ 6,923	$ 4,224	$ 8,831	$ 5,388
Jewelry	$ 2,950	$ 1,800	$ 3,257	$ 1,987	$ 4,154	$ 2,534	$ 5,298	$ 3,233
Home Furnishings	$ 4,917	$ 6,600	$ 5,248	$ 7,286	$ 6,923	$ 9,293	$ 8,830	$11,854
Gifts	$ 3,933	$ 3,000	$ 4,342	$ 3,312	$ 5,538	$ 4,224	$ 7,064	$ 5,388
Restaurants and Entertainment	$ 8,850	$ 4,500	$ 9,770	$ 4,968	$12,461	$ 6,336	$15,895	$ 8,082
Service	$ 2,950	$ 1,800	$ 3,257	$ 1,987	$ 4,154	$ 2,534	$ 5,298	$ 3,233
Cinema	$ 2,400	$ 2,400	$ 2,640	$ 2,640	$ 3,375	$ 3,375	$ 4,305	$ 4,305
Health Club	$ 5,600	$ 5,600	$ 6,160	$ 6,160	$ 7,875	$ 7,875	$10,045	$10,045
Community Retail	$ 1,296	$ 1,296	$ 1,426	$ 1,426	$ 1,822	$ 1,822	$ 2,325	$ 2,325
TOTAL	$71,956	$39,296	$79,349	$43,345	$101,294	$55,311	$129,162	$70,556

SOURCE: Larry Smith & Company, Ltd.
1) With Specialty Retail Store
2) Without Specialty Retail Store

The Copley Place retail component, compared to the 1978 concept, is evolving toward a "specialty center" which will depend more on the combined attraction of all the retail and recreation functions and ambience of the center rather than the traffic generated by major stores. Characteristically specialty centers have trade areas which are as extensive as centers with major department stores but the market penetration is "shallow." Specialty center shoppers are more likely to visit other shopping facilities on the same trip. The specialty center is likely to be the first stop of the shopper. Specialty center shoppers visit the center less frequently than major store centers but travel about the same distance and tend to spend more per purchase for non food items.

The estimated and projected sales of the Copley Place retail and recreation facilities are shown in Table 1-3. Sales within the specialty store are estimated at $130 per square foot of GLA and mall shops at $250 per square foot. These sales figures are higher than would be experienced in regional malls with the conventional department stores acting as major traffic generators, but are well within the range experienced by the "specialty centers" developed in recent years in California and Washington D.C. Entertainment facilities and community retail are not expected to generate sales as high as the mall shops but should operate at about $160 per square foot.

The estimated shopping goods or DSTM sales, for all of the mall shops except restaurants, entertainment and service, for 1983 for Copley Place are about $51 million in Plan A and about $24 million in Plan B.

The Boston SMSA sales in DSTM stores, reported in the 1977 Census of Retail Trade was $2,424 million. Projected to 1983, at the 5% per year

increase experienced from 1972 to 1977, the SMSA sales will reach $3,248 million. The Copley Place DSTM sales will represent 1.6% of the SMSA total with the large specialty store and about 0.7% without.

Sales beyond 1983 are projected at a rate of 5% compounded annually to the projection years of 1985, 1990 and 1995. This increase is reflective of the growth of retail sales within the Boston metropolitan area from 1972 to 1977 as reported in the Census of Retail Trade.

Sales productivity of the levels estimated for the Copley Place stores are characteristic of small shops in areas of relatively high traffic such as integrated shopping centers. It is this high productivity which allows relatively high occupancy costs, rent plus other charges. In the smaller shops occupancy cost may be about 12% of sales down to 5% in larger shops. Occupancy costs tend to reflect sales productivity in retail facilities as well as facility production cost.

The sales estimates shown in Table 1-3 assume a fully leased project in 1983; they are projected at a constant rate of growth based on the 1983 estimate. Although the project is expected to be operating in 1983, delays in construction or an extended leasing program might result in a fully operational project not being realized until the period 1983-1985. Following this, the sales pattern established for Copley Place retail may begin at a slower pace initially, and grow at a rate much higher than that reflected in Table 1-3. Thus, a more varied sales pattern would result for Copley Place attributable more to the internal dynamics of the project - i.e., achievement of a full retail complement and a stabilized tenant mix -- than is reflected in the fixed rate projection.

TABLE 1-4

COPLEY PLACE DAILY POPULATION

	With Specialty Retail Store	Without Specialty Retail Store
Hotel Employees[1]	1,814	1,814
Hotel Guests[2]	1,475	1,475
Hotel Users[3]	3,220	3,220
Office Employees[4]	3,205	4,180
Office Visitors[5]	1,603	2,090
Housing Residents[6]	270	270
Housing Guests[7]	27	27
Retail Employees[8]	1,147	570
Parking/Maint. Employees[9]	120	120

NOTE: Individual items should not be totalled.

SOURCES:
1) Estimated at 1.0 employees per convention hotel room and 1.2 employees per luxury hotel room.
2) 1672 rooms at 75% occupancy; business 54%, convention 33%, tourist 13%. Business rentals estimated for single occupancy; convention rentals estimated at 14% double occupancy and 86% single occupancy as per American Society of Association Executives survey; tourist rentals estimated for single occupancy.
3) Estimates made for non-guest use of public function areas and restaurant facilities are from prospective hotel tenants at Copley Place.
4) Estimated at one per 200 sq. ft. of GLA.
5) Estimated at .5 per employee.
6) 100 units at 2.7 persons per unit as per BRA, Characteristics of Population: Families and Households And Their Level of Income, For the City of Boston and the Metropolitan Area 1960 and 1970 Actual, and 1980 and 1985 Projected, August 1974, Table 1-A.
7) Estimated at .1 per resident.
8) Estimated at one equivalent full-time employee per 500 sq. ft. GLA - 40% full-time, 60% part-time/temporary.
9) BRA Memorandum, October 22, 1979.

The daily population of Copley Place is established by estimating the activity associated with each project component. As described earlier, Copley Place will offer a mix of facilities including the retail shopping mall, a luxury hotel, a convention hotel, office space and housing units. Each use will generate an occupying population made up of employees, residents (both permanent and transient) and users. Residents and employees will occupy various project components for the greatest portion of the typical workday while customers, visitors and guests, attracted by one or several of the project's multiple uses, will be within the project for smaller portions of each day.

Each use within the project can be expected to generate people independently of other components. However, a great deal of interaction will undoubtedly be realized as the project's occupants take advantage of the convenience offered by the project's multiple uses. For these reasons an estimate of the total daily population probably includes considerable and undetermined overlap and dependency on the degree of interaction by the project's permanent and transient occupants. These internal relationships and the relationship of the project's components to their supporting markets preclude an estimate of a total daily population by summing the components.

An estimate of the daily population by project component is shown in Table 1-4. No estimate for the number of retail shoppers is shown that is not already included in other categories. The rationale or methodology for each component is indicated within the supporting footnotes.

General industry standards are applied to the office, housing, and retail segments of the project to derive the expected daily populations. Information regarding hotel use was derived from prospective hotel tenants. The hotel data reflects the size of each facility as well as the type of public function and accommodation planned within each hotel.

The site of the project is an area of about 9.5 acres located over a Massachusetts Turnpike interchange and the development requires the lease of air rights. The project includes ramps of the Turnpike and a section of railroad easement. These complexities make the development of the project expensive when compared to average suburban shopping center development.

The location of the center provides good access because of the Massachusetts Turnpike and the adjacent Back Bay Station, which is to be developed as a major commuter terminal and rapid transit station of the relocated Orange Line. These facilities are complemented by the existing access provided by the MBTA Green Line with stations at Arlington Street, Copley Square, Prudential and Massachusetts Avenue.

The general concept of the Copley Place retailing function is to provide an unusual, highly attractive, centrally located shopping facility which can reach a wide trade area made accessible by a central location and several modes of travel.

Boston, Mass. SMSA

SECTION II

COPLEY PLACE
RETAIL SALES

The market potential which is generated by the residents of the Boston SMSA and its adjoining areas will be the major factor in determining the outlook for the metropolitan area retail facilities. Shopper surveys conducted by the BRA, The Rouse Company, and those conducted for Larry Smith and Company, Ltd., show that inner city retail facilities generally attract shoppers from throughout this metropolitan area.

The Boston SMSA as defined by the 1972 Census of Retail Trade consists of 95 municipalities in Suffolk County and parts of Essex, Middlesex, Norfolk and Plymouth Counties. The area coincides relatively closely with that part of the Boston hinterland which lies within Interstate Highway 495. The exceptions are that the SMSA includes part of Plymouth County and does not include some parts of northern Essex County. Municipalities falling within the SMSA definition are shown on the map page opposite.

The market potential from which Copley Place will derive its retail sales is a product of the SMSA population and an average annual per capita expenditure factor. The first factor involved in the calculation of the market potential, the SMSA population, is shown in Table 2-1. The population has been projected on the basis of the absolute changes which occurred in each of the 95 municipalities involved in the definition from 1970 to 1975. The exception to this methodology is the city of Boston for which BRA estimates were used. The data source for the population changes is the Current Population Report, P-25 Series, Number 669, May 1977, Bureau of the Census. This data source was

TABLE 2-1

BOSTON SMSA POPULATION*
(000)

County	1979	1983	1985	1990	1995
Essex	326	319	313	299	285
Middlesex	1,060	1,053	1,047	1,033	1,018
Norfolk	621	632	638	653	668
Suffolk	750	754	758	767	776
Plymouth	170	184	191	208	225
Total	2,927	2,942	2,947	2,960	2,972

* 1972 Census of Retail Trade definition, includes parts of Essex, Middlesex, Norfolk and Plymouth Counties. Projected on absolute population change 1970-1975 by municipality except for Boston for which BRA estimates were used. Current Population Report, P-25 Series, No. 669, May 1977.

TABLE 2-2

BOSTON SMSA COUNTIES 1979 MONEY INCOME

County	1979 Population (000)	1979 Per Capita Income	1979 Total Income (millions)
Essex	326	$6,702	$2,185
Middlesex	1,060	7,119	7,546
Norfolk	621	7,610	4,726
Plymouth	170	6,094	1,036
Suffolk	750	6,049	4,162
Total	2,927		$19,655
SMSA Per Capita		$6,716	

NOTE: Data are for SMSA as defined for 1972 Census.
SOURCE: Current Population Reports, Series P-25, No. 669, May 1977, Bureau of the Census.

used in order to provide a comprehensive and compatible source of population data for each of the municipalities involved. The population is projected for 1983, 1985, 1990 and 1995. The projection shows the metropolitan area increasing at a rate of about 0.1% per year. This projection implicitly assumes the continuation of the absolute rates of change which occurred in each of the municipalities from 1970 to 1975. It reflects declining population in parts of Essex County and in the "inboard" sections of Middlesex County like Everett, Malden, Medford, Melrose, Newton, Sommerville, and Waltham. Some of these municipalities are changing at relatively small rates and may, in fact, be stabilized so that the projected population may be a conservative estimate.

The estimated 1979 per capita money income for the counties of the Boston SMSA is shown in Table 2-2. This income has been projected from the updated estimates provided in the Current Population Report series which estimates income by counties and municipalities up to 1974. The 1979 income shown in Table 2-2 is a result of projecting 1974 estimated income at the rates of change which were experienced in the individual counties from 1969 to 1974. Therefore, this income has a current dollar value.

The SMSA is estimated to generate a total income of $19.7 billion in 1979 and the average SMSA per capita annual money income is estimated at $6,716. This factor is important in estimating the metropolitan area sales potential since it forms the basis for estimating per capita expenditure patterns. It is from this pattern that DSTM potential for the metropolitan area is derived. The DSTM figure is deemed the most relevant figure for estimating potential sales in the retail facilities at Copley Place.

TABLE 2-3

ORIGIN OF SHOPPERS BY LOCATION AT SELECT BOSTON RETAIL FACILITIES

Residence	Newbury (F-77) [1][3]	Faneuil Hall (F-77) [2][3]
City of Boston	43.4%	37.8%
Remainder of SMSA	32.5%	55.8%
Remainder of Mass.	8.1%	6.0%
Remainder of N.E.	5.0%	.4%
Remainder of U.S.	9.4%	-
Outside U.S.	1.3%	-

SOURCE: 1) Shoppers Survey by BRA.
2) The Rouse Company, Shoppers Survey, "Shopper Characteristics By Point of Origin," Non-Tourists only.
3) Fall 1977, survey dates.

Origin of Sales by Location

The particular retail appeal of Copley Place is judged to be similar to other inner Boston retail facilities particularly those at Faneuil Hall and along Newbury Street. The similarity of these shopping facilities to the concept proposed for Copley Place serves as a basis for estimating the pattern of the origin of prospective Copley Place shoppers.

Table 2-3 is taken from shopper surveys conducted at the retail facilities along Newbury Street in the Back Bay and at Faneuil Hall within the Boston CBD. The surveys show that 76% of the shoppers along Newbury Street originate from within the SMSA while about 94% of the non-tourist customers interviewed at Faneuil Hall stated that their residence was within the SMSA. Non-tourist data taken from interviews at Faneuil Hall in this case are utilized because it cannot be anticipated that Copley Place will attract tourist expenditures to the same extent that the Faneuil Hall complex does.

The data supplied by these shopper surveys and shown in Table 2-3 are used to establish the approximate amount of retail sales which can be expected to be generated from within the metropolitan area. From Table 2-3 it can be seen that about 85% of all customers at Newbury Street and Faneuil Hall originate from within the Boston SMSA. This 85% figure corresponds closely to the percentage of sales usually generated from the primary trade area of a typical regional shopping facility. Thus, in the case of Copley Place, 85% would be a fair estimate of the amount of sales generated from the metropolitan area. To further establish the pattern of sales within the metropolitan area it is necessary to weight the number of potential shoppers, i.e., population, by the amount of total income. These steps are described in the following section.

METROPOLITAN TRAFFIC SECTORS AS ASSIGNED
BY THE CENTRAL TRANSPORTATION PLANNING STAFF CTPS

TABLE 2-4

COPLEY PLACE OFF-SITE SALES
BY LOCATION OF ORIGIN

Location	Percent Sales
Back Bay[1]	.9%
Central Boston[1]	1.2%
City of Boston, excluding Back Bay and Central Boston	13.9%
Metropolitan Boston, excluding Boston City	
Northeast	13.1%
North	9.0%
Northwest	13.6%
West	17.3%
Southwest	5.0%
Southeast	11.0%
New England, excluding Boston SMSA	9.7%
Outside New England in U.S.	4.8%
Outside U.S.	.5%
Total	100.0%

SOURCE: 1) Derived from office employee expenditures for DSTM, A Survey on Downtown Boston's "Captive" Retail Market of Office Employees and New High-Rise Apartment Dwellers: Where They Shop and Why, Boston Redevelopment Authority Research Department, 1975.

NOTE: Back Bay is defined here as the BRA planning district designated Back Bay-Beacon Hill-Bay Village.
Central Boston includes the CBD and the BRA planning districts designated as North End-Waterfront and Chinatown-South Cove.
Back Bay and Central Boston sales include employee expenditures and resident expenditures.

TABLE 2-5

OFFICE WORKER SURVEY RESULTS:
WHERE DID YOU BUY THE FOLLOWING ITEMS?

Item/Response	CBD	Back Bay	Other Boston	Suburbs	Other	Total
Female Clothes						
Percent of Purchases	55.1	5.7%	1.5%	36.7%	.9%	100.0%
Male Clothes						
Percent of Purchases	51.4%	10.3%	2.5%	29.6%	6.2%	100.0%
Shoes						
Percent of Purchases	51.0%	7.6%	2.8%	32.9%	5.6%	100.0%
Coats						
Percent of Purchases	54.0%	5.1%	2.9%	30.7%	7.3%	100.0%
Children's Clothes						
Percent of Purchases	48.7%	5.7%	3.8%	38.0%	3.8%	100.0%
Furniture						
Percent of Purchases	24.3%	2.0%	8.1%	61.5%	4.1%	100.0%
Radio, TV, Stereo						
Percent of Purchases	26.9%	9.0%	1.3%	55.1%	7.7%	100.0%
Major Appliances						
Percent of Purchases	10.0%	0.0%	0.0%	80.0%	10.0%	100.0%
Minor Appliances						
Percent of Purchases	28.0%	2.0%	0.0%	66.0%	4.0%	100.0%

SOURCE: A Survey of Downtown Boston's "Captive" Retail Market of Office Employees and New High-Rise Apartment Dwellers: Where They Shop and Why, Boston Redevelopment Authority Research Department, 1975.

SMSA Sales

In order to determine the origin of sales within the SMSA, the assumption is made that those sales would be proportionately distributed throughout the various sectors of the SMSA according to a pattern of expenditure potential represented by income and resident population. Also considered are significant expenditures generated from office employees within the business sectors of the City of Boston.

Table 2-4 shows the distribution by location-of-origin of Copley Place sales drawn to the retail facilities within the project. As indicated above, the greatest portion of off-site sales can be expected from within the Boston SMSA. The assignment of shares within the SMSA but to sectors outside the city follows the areal division established by the Central Transportation Planning Staff (CTPS). These sectors are shown on the map opposite Table 2-4. Specific shares are assigned on the basis of DSTM potential (population and income expenditure for DSTM merchandise). The portions assigned to the Back Bay and Central Boston include expenditures made by office employees for DSTM goods in addition to the resident expenditure potential. For purposes of making these assignments to subareas within the City of Boston, the definition of Back Bay is expanded beyond that given by the Bureau of the Census for the 1972 Census of Retail Trade and used in Section III of this report. This expanded definition of Back Bay includes the resident population of the BRA planning district designated as Back Bay-Beacon Hill-Bay Village. Central Boston includes the CBD and the planning districts designated North End-Waterfront and Chinatown-South Cove.

Office Employee Expenditures

Surveys conducted by the BRA Research Department have established that office employees spend approximately 55% of their DSTM clothing expenditure and 35% of their DSTM minor appliance expenditure at retail facilities in the CBD (Table 2-5). In 1978 these expenditures would amount

to 14.2% of the average DSTM expenditure of $976 per capita. According to BRA inventory of office space, Boston contains about 38 million square feet of private office space in the Downtown, 8 million square feet of which is in the Back Bay. These facilities could house a working population on the order of 190,000 persons in the total Downtown, 40,000 in the Back Bay. By applying the share of office employee expenditures against the total employment, a measure of DSTM expenditures is established for the Back Bay and the Downtown. The total office employee expenditure, $26.4 million in 1978, amounts to less than 1% of the DSTM potential for the entire SMSA. The .9% and 1.2% shares of potential off-site sales at Copley Place in Table 2-4 for the Back Bay and Central Boston reflect potential generated by both office workers and residents in the area.

Assuming that office employees reside proportionately to the general population, their DSTM potential is subtracted from each metropolitan sector including the City of Boston to avoid a double count and a percent share of project sales is assigned to each sector. The share assigned to the City of Boston is derived from the DSTM potential of its resident population excluding Back Bay and Central Boston.

The off-site sales from beyond the metropolitan area are assigned on the basis of the shopper responses indicated in Table 2-3. Thus, assignments are made totaling 15% for the remainder of New England, outside New England in the U.S. and outside the U.S.

Sales by Origin

Because Copley Place is planned for multiple uses, a significant amount of the retail sales will be generated by the on-site population. This on-site population is comprised of employees, residents (temporary and transient), visitors and guests. An estimate of the Copley Place daily population is presented in Section 1, Table 1-4.

On-Site Sales

In order to establish the amount of sales which would be generated from among the daily project population, it is necessary to identify the components of that population which would contribute independently to total retail sales. In the case of Copley Place, three sources of on-site sales are identified:

1) Sales from employees related to hotel, office, and retail facilities;
2) Sales from residents; and
3) Sales from hotel guests.

The methodology used to estimate retail sales from the on-site population is summarized in Table 2-6. It should be noted that each component is estimated individually and annual expenditures are calculated either on the basis of a proportionate share of its DSTM expenditures or on the basis of a periodic expenditure for retail goods and services. Expenditures from the resident population are weighted by discounting the portion of DSTM sales generated from the subsidized population by one-half. As is indicated in the summary table (Table 2-6), hotel guests account for about 76% of total annual expenditures from on-site sources with the specialty retail store and 72% without the specialty store. Their contribution to overall sales is derived from an industry survey initiated by the International Association of Convention and

TABLE 2-6

COPLEY PLACE ON-SITE SALES METHODOLOGY[1]

	Daily Population	Daily Expenditure	DSTM Expenditure Per Capita	Other Expenditure	Total Annual Expenditure	Total Copley Place Sales[8]
With Specialty Retail Store						
Workplace						
Hotel	1,814		$ 104[2]		$ 188,656	$ 79,236
Retail	1,147		$ 178[3]		$ 204,166	$ 85,749
Office	3,205		$ 178[3]	$23.39[4]	$4,467,770	$1,876,465
Parking/Maintenance	120		$ 104[2]		$ 12,480	$ 5,242
Residents						
75% Standard	203		$1,233[5]		$ 250,299	$ 105,126
25% Subsidized	67		$ 617[6]		41,339	17,362
Hotel Guests						
Convention/Tourists	678	$30.27[7]			$7,490,895	$3,146,176
Business	797	$30.17[7]			$8,776,425	$3,686,099
					$21,432,030	$9,001,455
Without Specialty Retail Store						
Workplace						
Hotel	1,814		$ 104[2]		$ 188,656	$ 43,391[9]
Retail	570		$ 178[3]		$ 101,460	$ 23,336
Office	4,180		$ 178[3]	$23.39[4]	$5,826,920	$1,340,192
Parking/Maintenance	120		$ 104[2]		$ 12,480	$ 2,870
Residents						
75% Standard	203		$1,233[5]		$ 250,299	$ 57,569
25% Subsidized	67		$ 617[6]		$ 41,339	$ 9,508
Hotel Guests						
Convention/Tourists	678	$30.27[7]			$7,490,895	$1,722,906
Business	797	$30.17[7]			$8,776,425	$2,018,578
					$22,688,474	$5,218,350

TABLE 2-6

COPLEY PLACE ON-SITE SALES METHODOLOGY
(Continued)

1) All figures represent 1983 sales.
2) Estimated that 35% of DSTM expenditures from Furniture/Home Furnishings/Equipment and Miscellaneous Retail categories equal 8.4% of DSTM expenditure.
3) Estimate that 55% of DSTM expenditure from Apparel and Accessories and 35% of Furniture/Home Furnishings/Equipment and Miscellaneous Retail categories equal 14.2% of DSTM expenditure.
4) Larry Smith and Company, Ltd., Downtown Employee Survey, New York, and adjusted for income differential; figure represents a weekly expenditure for food and drink.
5) DSTM expenditure at 100%.
6) DSTM expenditure at 50%.
7) 1973 IACVB Convention Delegate Expenditure Survey, U.S. Travel Data Center; figure represents a daily expenditure for restaurants outside of hotel restaurants, retail stores and beverages; the expenditures, $30.27 (convention/tourists) and $30.17 (business), represent about 33% of the total daily expenditure by hotel guests.
8) Copley Place capture rate @ 42%.
9) Copley Place capture rate @ 23%.

NOTE: Total daily expenditure for a hotel guest is estimated at $92.83; total annual expenditures from this source should be on the order of $50 million.

Visitors Bureaus and published by the U.S. Travel Data Center. The daily expenditure by hotel guests is generated from average purchases made in retail stores, restaurants outside of hotel restaurants, and in theaters. The survey data base year is 1973 and dollar figures are presented in current dollars by applying the rate of change in the Consumer Price Index to 1979 and projecting to 1983 by 5% compounded annually.

The retail facilities planned for Copley Place will present an attractive and convenient shopping location for the total project population. Retail facilities within the project are sized on the order of 359,000 sq. ft. with the Specialty store plan and 178,000 sq. ft. without it. In addition to Copley Place retail facilities the project population will also be convenient to shopping facilities located at Prudential Center and in the Back Bay. Retail facilities in the Prudential Center are presently sized at about 400,000 sq. ft. A survey of the Back Bay Association developed in 1978 indicates that along Newbury and Boylston Street from Arlington Street to Massachusetts Avenue, there is about 970,000 sq. ft. of commercial retail space. Therefore, as the table below shows, Copley Place retail represents about 21% of total available retail space with the specialty store, and under the alternate plan without the specialty store, 11.5%.

Pro Rata Share Retail Space			
Prudential Center	400,000 s.f.	Prudential Center	400,000 s.f.
Back Bay	970,000 s.f.	Back Bay	970,000 s.f.
Copley Place w-Specialty	359,000 s.f.	Copley Place w/o Specialty	178,000 s.f.
	1,729,000 s.f.		1,548,000 s.f.
Copley Place Share	21%	Copley Place Share	11.5%

TABLE 2-7

POINT OF ORIGIN
AT SELECT BOSTON RETAIL FACILITIES

	Newbury (1 (F-77)	Faneuil Hall (2 (F-77)	Likely (3 Specialty Area Breakdown
Workplace	24%	27.7%	27.8%
Residence	49%	58.8%	58.0%
Hotel Tourists	4%	1.0%	2.7%
Business Visitors	5%	1.1%	3.3%
Other Shopping Areas	7%	8.2%	8.2%
Undetermined	11%	3.2%	-

1) Derived from Shoppers Survey by BRA
2) Derived from The Rouse Company, Shoppers Survey, "Shopper Characteristics by Point of Trip Origin", non-tourists only.
3) Derived by a weighted average of distributions for Newbury and Faneuil Hall by utilizing only the "determined" points of origin.

Because the project population will be working at or residing within Copley Place, the retail facilities provided at Copley are considered to be more convenient and attractive and, therefore, are more likely to retain sales contributed by its on-site population. Therefore, a double share of effectiveness is assigned to Copley Place retail. In Table 2-6 Copley Place sales are calculated on the basis of double the pro rata share, or 42% and 23% respectively. With the Specialty store, Copley Place should retain about $9,001,455 of the on-site sales potential, while under the revised plan about $5,218,350 of the on-site sales potential would be retained within the project.

Off-Site Sales

The point of origin of the off-site sales should run close to the pattern established by the specialty shopping areas now operating within the existing Downtown retail market. The two specialty areas examined in Table 2-3 are again used as a basis for determining the point of origin of the off-site sales. Table 2-7 presents data gathered from BRA sources and The Rouse Company for these two areas. A weighted average of these two distributions yields the likely distribution of off-site sales by point of origin for Copley Place.

In Section I, Table 1-3, total sales for Copley Place retail were estimated at $71,956,000 with the specialty retail store and $39,296,000 under the alternate retail plan without the specialty store. The difference between the sales generated on-site, calculated in Table 2-6, and the total retail sales, represents the total amount of retail sales generated from off-site sources or $62,954,545 and $34,077,650 respectively.

The distribution of sales by origin for on-site generated sales is established by calculating sales-by-origin for each segment of on-site sales against total sales. Off-site sales distributions are made by applying the residual proportion (100% - On-Site Sales/Total Sales) against the Specialty Area Breakdown shown in Table 2-7. Table 2-8 is the result of

TABLE 2-8

DISTRIBUTION OF COPLEY PLACE SALES
BY ORIGIN

	With Specialty Retail Store		
	On-Site[1]	Off-Site[2]	Total
Workplace	2.84%	24.33%	27.17%
Residence	.17%	50.75%	50.92%
Hotel Tourist	4.37%	2.36%	6.73%
Business Visitor	5.12%	2.89%	8.01%
Other Shopping Area	N.A.*	7.17%	7.17%
Total	12.5 %	87.5 %	100.00%

	Without Specialty Retail Store		
	On-Site[3]	Off-Site[2]	Total
Workplace	3.58%	24.11%	27.69%
Residence	.17%	50.31%	50.48%
Hotel Tourist	4.38%	2.34%	6.72%
Business Visitor	5.14%	2.86%	8.00%
Other Shopping Area	N.A.*	7.11%	7.11%
Total	13.27%	86.73%	100.00%

* Not applicable.

SOURCE: 1) On-Site generated sales are estimated on the basis of retail sales by employees, residents and overnight guests with Copley Place retaining 42% of total potential.

2) Off-Site generated sales are estimated by apportioning the residual from total sales minus On-Site generated sales by pattern established for Newbury Street-Faneuil Hall in the Boston Shopper Survey (Table 2-7).

3) On-Site generated sales are estimated on the basis of retail sales by employees, residents and overnight guests with Copley Place retaining 23% of total potential.

these calculations and presents the full distribution pattern for both on-site and off-site sales under both development plans. With Copley Place fully operational and fully tenanted, sales generated from on-site sources should amount to about 12.5% of total sales under the Specialty Store plan with the remainder, 87.5%, generated from off-site sources. If the alternate development plan without the Specialty store is developed the likely distribution of on-site and off-site sales would change only slightly. As is shown in Table 2-8 on-site sales would account for 13.27% of total sales and off site sales, 86.73%.

The distribution shown in Table 2-8 differs slightly from that shown in column 3 of Table 2-7 because of the assumption of specific on-site generated sales in Copley Place.

TABLE 2-9

MAJOR RETAIL DEVELOPMENTS BOSTON METROPOLITAN AREA

	Retail Space Sq. Ft.
Lechmere Canal Triangle, Cambridge[1]	800,000
Wellington Station, Medford[1]	450,000
Columbia Point Bayside, Boston[2]	150,000
Park Plaza, Boston[2]	170,000
Lafayette Place, Boston[2]	370,000
Galleria Sargents Wharf, Boston[2]	37,000
Hynes/Prudential, Boston[2]	50,000

1) Executive Office of Environmental Affairs and Cambridge Planning Department.
2) What are the Planning Priorities? A Comparative Analysis of Proposed Development Projects in the City of Boston as of April 1978, BRA, Staff Report.

Impact of Other Regional Developments

In addition to Copley Place, there are a number of planned, proposed and developing facilities in the metropolitan area which will provide for retailing. The major developments which are identifiable from public records and which were judged to be of enough importance to give consideration are shown in Table 2-9. Some of these projects represent additions to existing facilities and the existing facility is included in the total space indicated; some of the projects are part of multi-use projects and are not yet at a stage where the actual amount of space to be developed can be determined.

Lechmere Canal Triangle

This project is designed to provide 800,000 square feet of retail space. It is being planned around a major existing discount store. This project is large enough to represent a regional retail center. On the basis of the nature of the location and the existing facilities, any such center would probably be of a discount or popular price tone. Because of its intermediate inner city location, it will have to compete with major regional suburban malls such as Burlington Mall and North Shore and obtaining tenants for Lechmere may prove to be difficult because of the commitments of major stores in the suburban centers. The status of the retailing at this time is uncertain. This project would provide relatively little competitive impact on Copley Place because of the difference in price levels and tenant types.

Wellington Station

This is a project of moderate size which is a part of an office space re-development, planned around an MBTA station. It will face the same competition from the suburban malls and therefore, experience difficulty with obtaining the same tenants. Wellington Station is not likely to impact Copley Place.

Columbia Point

This is part of a multi-use project. The retail facilities would be on the order of a neighborhood functional level to serve local residents and would be of a completely different character than those anticipated in Copley Place.

Park Plaza

The portion of this project which is presently scheduled for development beginning in 1980 is the State Transportation Building. A street level interior mall with atrium is planned to include 70,000 square feet of retailing. The general character of the retailing is perceived to follow the pattern of the Quincy Market. Additional phases of the project, not scheduled at this time, could accomodate an additional 100,000 square feet of retailing. Some parts of this project could be competitive with Copley Place to a degree. It could also contribute to the total attraction of the Back Bay area.

Lafayette Place

This project consists of 250,000 square feet of committed retail space and a potential department store of 120,000 square feet. This would significantly improve the position of the CBD retailing function relative to the suburban development. The degree of competitive effect which the addition of a department store to the CBD would have on Copley Place will depend on the nature of the store. The additional attraction of a quality department store in the central business district could also result in some increased traffic to the inner city retail areas and improve the possibility of interaction and possible spin-off to both Copley Place and Back Bay.

Galleria

The Galleria on Sargents Wharf takes its name from the concept of planning the project around a gallery. The total project is to be mixed use. The location of the Galleria would suggest that the project will tend to be a specialty center, although it may also have some function of providing retailing for housing developed in the area and providing service to office space employees. The relatively remote location of the project would suggest that it will be difficult to tenant and not likely to be an extremely competitive retail development.

Hynes/Prudential

This project is really ground level space, proposed to be developed in conjunction with the expansion of Hynes Auditorium. This would represent an addition to the Back Bay commercial frontage and a part of the normal growth and evolution of the commercial facilities associated with the employment and visitor traffic in the Back Bay in the vicinity of Prudential Center and Copley Place. To some degree, this space may compete with Copley Place for tenants. The project is not as yet under way and the nature of the tenanting or the general quality of the facilities which will be provided is not discernible.

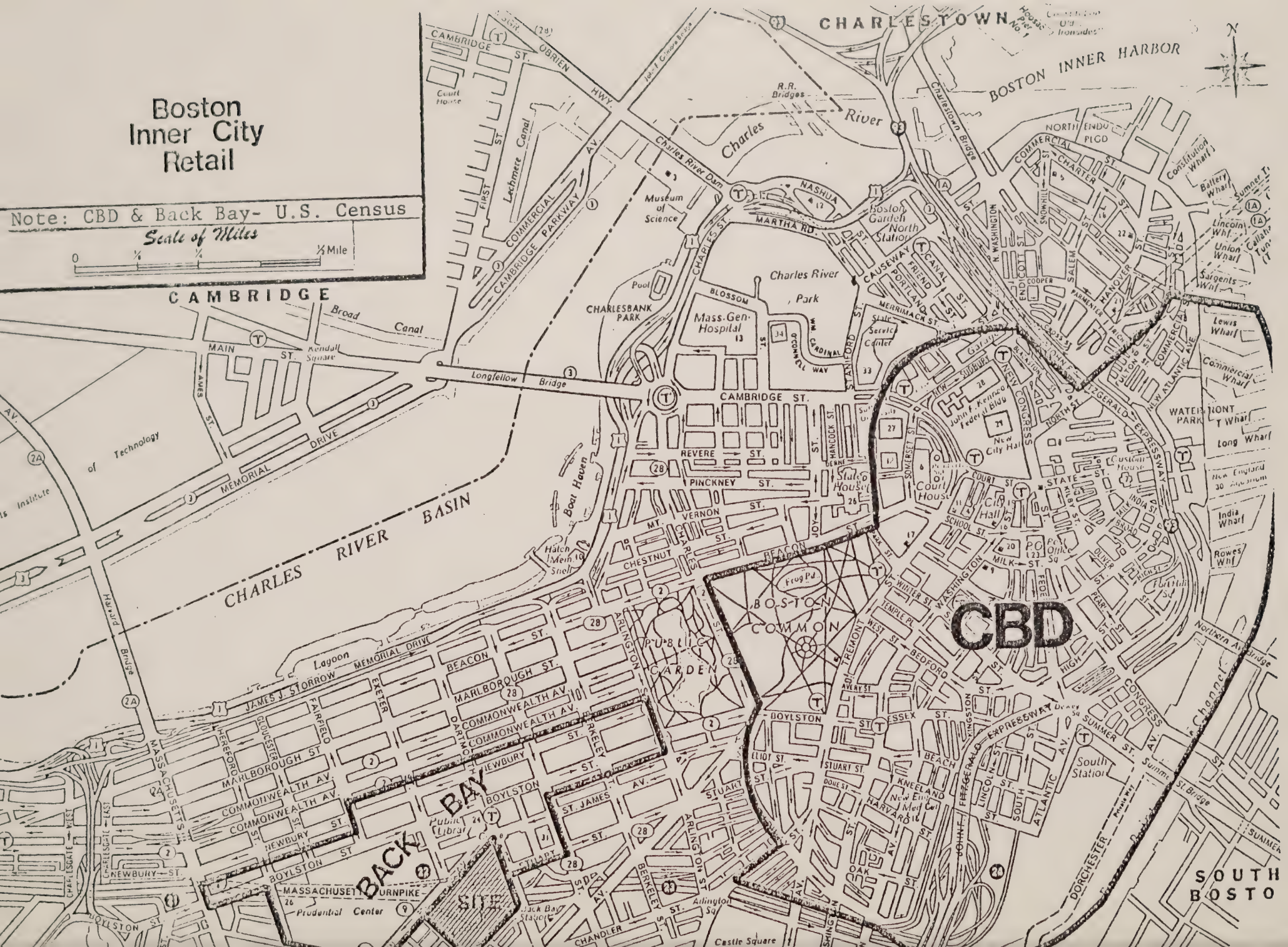
Impacts

In the light of the different functional levels, marketing characteristics, and locations, it does not appear that there is any significant competition affecting Copley Place or affecting the proposed projects. A degree of competition will exist, depending on tenants, in the Park Plaza space, Lafayette Place, and Hynes/Prudential.

The total department store type merchandise sales of the Boston standard metropolitan statistical area were about $2.4 billion in 1977. These

sales increased at a rate of $90 million per year from 1972 to 1977. If this rate of growth continues, the market will reach approximately $3 billion in 1983. The growth in sales of $540 million would support, at $150 sales per square foot per year, 3.6 million square feet of retail space. The accompaning list of major projects, the major part of which will probably not develop or which will not be competitive with Copley, totals about 2,027,000 square feet or about half of the total DSTM space which could be supported by six years of market growth.

It is anticipated that Copley Place will have a very unusual character, both because of its tenants and the project design. These factors tend to significantly limit the impact of any of the proposed developments on sales capture and spin-off to Copley Place.


Boston
Inner City
Retail
Note: CBD & Back Bay- U.S. Census
Scale of Miles
0
¼
½
¾
1 Mile
CBD
BACK BAY
SITE
SOUTH BOSTO
CHARLESTOWN
BOSTON INNER HARBOR
CAMBRIDGE
CHARLES RIVER BASIN
Charles River
Charles River Park
BOSTON COMMON
PUBLIC GARDEN
Mass. Gen. Hospital
Museum of Science
Charlestown Bridge
Longfellow Bridge
Harvard Bridge
Broad Canal
Lechmere Canal
Charles River Dam
Boston Garden North Station
South Station
Prudential Center
Public Library
Back Bay Station
Castle Square
Court House
City Hall
New City Hall
John F. Kennedy Federal Bldg
State House
Faneuil Hall
Quincy Market
Custom House
Massachusetts Institute of Technology
Kendall Square
Charlesbank Park
Boat Haven
Lagoon
Frog Pd
Commercial Wharf
Lewis Wharf
Union Wharf
Long Wharf
India Wharf
Rowes Wht
Lincoln Wht
Sargents Wht
Battery Wharf
Constitution Wharf
Central Artery
Fitzgerald Expressway
Northern Ave Bridge
Summer St Bridge
Dorchester Bay
Main St.
Cambridge St.
Beacon St.
Boylston St.
Newbury St.
Marlborough St.
Commonwealth Av.
Charles St.
Tremont St.
Washington St.
Stuart St.
Arlington St.
Berkeley St.
Dartmouth St.
Exeter St.
Fairfield St.
Gloucester St.
Hereford St.
Massachusetts Av.
Charles River Basin
Memorial Drive
James J. Storrow Memorial Drive
Commercial Parkway
Cambridge Parkway
First St.
O'Brien Hwy.
Charles River Dam
Martha Rd.
Causeway St.
Canal St.
Portland St.
Merrimack St.
Blossom St.
Cardinal Medeiros Way
Stanford St.
Pinckney St.
Revere St.
Mt. Vernon St.
Chestnut St.
Joy St.
Mancock St.
Somerset St.
Court St.
State St.
School St.
Milk St.
Franklin St.
Broad St.
India St.
Atlantic Ave.
Commercial St.
Hanover St.
Salem St.
Cooper St.
Parmenter St.
Snowhill St.
Charter St.
North End PlCD
Nashua St.
Friend St.
Cambridge St.
Staniford St.
Blossom St.
Leverett Circle
Callahan Tunnel
Ted Williams Tunnel
Mass. Turnpike
Chas. River Basin
Chas. River Basin West
Chas. River Basin East
Newbury St.
Boylston St.
Marlborough St.
Commonwealth Av.
Beacon St.
Arlington St.
Berkeley St.
Clarendon St.
Dartmouth St.
Exeter St.
Fairfield St.
Gloucester St.
Hereford St.
Massachusetts Av.
Harvard Bridge
Memorial Drive
James J. Storrow Memorial Drive
Lagoon
Public Garden
Boylston
Essex St.
Kneeland St.
Beach St.
Oak St.
Harrison Ave.
Albany St.
Lincoln St.
South Atlantic Ave.
Summer St.
Dorchester Ave.
Kingston St.
Bedford St.
Avery St.
West St.
Temple Pl.
Winter St.
Milk St.
Broad St.
India St.
Franklin St.
Oliver St.
High St.
Pearl St.
Purchase St.
Fort Point Channel
Fitzgerald Expressway
Central Artery
Northern Ave Bridge
Summer St Bridge
Dorchester Bay
Chandler St.
Dover St.
Shawmut Ave.
Harrison Ave.
Albany St.
Lincoln St.
South Atlantic Ave.
Kneeland St.
Beach St.
Oak St.
Essex St.
Boylston St.
Stuart

SECTION III

COPLEY PLACE AND THE BACK BAY

The Back Bay section of the inner city retail complex is shown on the map opposite as defined by the Bureau of Census for the 1972 Census of Retail Trade. Included in the delimitation of the Back Bay area is the Prudential Center opened in 1965 and containing about 400,000 square feet of retail area. This center includes Lord and Taylor and Saks Fifth Avenue as traffic-generating tenants. Back Bay retail facilities outside of the Prudential Center comprise about 970,000 square feet of space and has the Bonwit Teller located along Berkley Street and some fine clothing stores and high quality individual shops along Boylston and Newbury Streets. Because of their uniqueness, these facilities have developed a retail draw of wide extent for the entire Back Bay area.

According to the Shoppers Surveys conducted in the fall of 1977 and 1978, about 43% of all shoppers in Back Bay reside in the City of Boston. The remainder of the metropolitan area outside of the city contributes between 32% and 42% of all sales and the area beyond the metropolitan area contributes 16-24% of sales in the Back Bay. The area of residence for shoppers to the three sub-components of the Back Bay - Prudential Center, Boylston Street, and Newbury Street - is shown in Table 3-1. These figures demonstrate the degree to which the Back Bay attracts customers from the metropolitan, regional and even national/international market.

Retail Sales

The 1972 Census of Retail Trade, Major Retail Centers contains a listing of the number of retail stores by SIC code for the Back Bay area. Annual sales by major business groups are also reported and serve as the basis

TABLE 3-1

DISTRIBUTION OF BACK BAY SALES BY RESIDENCE

Residence	Prudential Center	Boylston	Newbury
City of Boston	43.2%	41.3%	43.4%
Remainder of SMSA	34.8%	42.4%	32.5%
Remainder of Mass.		4.1%	8.1%
Remainder of N.E.	11.7%*	6.4%	5.0%
Beyond	10.3%		
Remainder of U.S.		5.8%	9.4%
International			1.3%

SOURCE: Shoppers Surveys by BRA.
* Includes the remainder of Mass.

TABLE 3-2

BACK BAY RETAIL SALES METHODOLOGY

SIC Code	Kind of Business	1972[1] Sales (000)	1972[1] Sales/ Establishment (000)	1977[2] Sales/ Establishment (000)	Change In[3] Number Of Establishments	1977[4] Sales (000)
52	Building Materials	$ 1,028	$ 514	$ - -	- 2	$ - -
53	General Merchandise Group	$ 9,929	$ 3,310	$ 4,224	+ 1	$16,893
54	Food Stores	$ 2,176	$ 218	$ 278	+ 3	$ 3,611
554	Gasoline Service Stations[3]	--	--	$ 210	+ 1	$ 210
56	Apparel and Acces.	$ 37,011	$ 521	$ 665	+15	$57,201
57	Furniture, Home Furnishings, & Equipment	$ 6,007	$ 240	$ 306	-15	$ 3,075
58	Eating and Drinking	$ 13,328	$ 360	$ 459	+16	$24,351
591	Drug Stores	$ 3,366	$ 421	$ 537	- 1	$ 3,758
59, ex 591	Miscellaneous Retail	$ 19,736	$ 352	$ 449	+31	$39,102
	Total Retail Sales	$ 92,581				$148,201

1) 1972 Census of Retail Trade, Major Retail Centers.
2) Increased at 5% compounded annually.
3) The Back Bay Association and BRA survey.
4) 1972 Sales x 5% compounded annually, 5 years +(sales per establishment x Change in Number of Establishments)
NOTE: In 1977 survey of Back Bay retail establishments no stores were reported in SIC 52.

DCD-82

TABLE 3-3

BACK BAY RETAIL SALES
WITHOUT COPLEY PLACE

SIC Code	Kind of Business	Establishments[1]	Retail Sales (000)[2] 1979	1983	1985	1990	1995
53	General Merchandise Group	4	$ 18,625	$22,637	$24,957	$31,845	$ 40,634
54	Food Stores	13	$ 3,981	$ 4,839	$ 5,335	$ 6,807	$ 8,686
554	Gasoline Service Stations[3]	1	$ 232	$ 281	$ 310	$ 396	$ 505
56	Apparel and Accessory	86	$ 63,064	$76,649	$84,506	$107,830	$137,591
57	Furniture, Home Furnishings, and Equipment	10	$ 3,390	$ 4,121	$ 4,543	$ 5,797	$ 7,397
58	Eating and Drinking	53	$ 26,847	$32,630	$35,975	$45,904	$ 58,574
591	Drug Stores	7	$ 4,143	$ 5,036	$ 5,552	$ 7,084	$ 9,039
59	Miscellaneous Retail	87	$ 43,110	$52,397	$57,768	$73,712	$ 94,057
Total		261	$163,392	$198,590	$218,946	$279,375	$356,483

SOURCES:
1) 1978 data from surveys by BRA
2) Projections made from 1977 base estimate; sales figures are advanced by 5% per annum compounded
3) New establishment not shown in 1972 Census of Retail Trade for Back Bay Area; sales estimated on basis of sales per establishment, CBD and Boston, 1977 Census of Retail Trade.

for estimating current sales in the Back Bay area. Immediately following is a description of the methodology used to estimate retail sales in the Back Bay without the construction of Copley Place.

The Back Bay Association and the BRA have made available a 1978 survey of retail facilities in the Back Bay which shows that the total number of establishments for the area including Prudential Center has increased from 212 in 1972, to 261 in 1978. Thus, by using 1972 sales figures by major store type and the increase in the number of establishments, the methodology summarized in Table 3-2 was applied to produce the current estimate. In this projection all 1972 sales figures are brought forward at the rate of 5% compounded annually.

The resulting sales estimate for 1977 is projected to 1979 and the projection years 1983, 1985, 1990 and 1995 in Table 3-3. By the end of 1979, it is estimated that retail facilities in the Back Bay should generate on the order of $163 million in total sales. This represents an increase of $70 million over the $93 million reported by the Bureau of the Census in 1972.

Copley Place Spin-off

With the addition of the Copley Place project adjacent to the Back Bay retail area in 1983, another major retail attraction will have been added to the Inner City shopping facilities in the City of Boston. As is shown in previous sections of this report, the retail facilities in Copley Place are to be of such a nature as to attract customers throughout the metropolitan area and beyond. As the project is planned, it will generate a significant share of its retail customers from within the project. While it is expected that a large share of these potential sales will be retained within the project's retail facilities, a share of potential sales should be spun-off to other retail areas within the city, particularly those within the Back Bay area.

TABLE 3-4

1983
COPLEY PLACE SPIN-OFF GENERATION

	Total Annual Expenditure [1]	Copley Place Capture [1]	Copley Place Spin-Off [2]	Back Bay Capture
		With Specialty Retail Store		
ON SITE				
Workplace				
Hotel	$ 188,656	$ 79,236	$ 109,420	$ 27,355 [3]
Retail	$ 204,166	$ 85,749	$ 118,417	$ 29,604 [3]
Office	$4,467,770	$1,876,465	$2,591,305	$1,964,159 [4]
Parking/Maintenance	$ 12,480	$ 5,242	$ 7,238	$ 1,810 [3]
Residents				
75% Standard	$ 250,299	$ 105,126	$ 145,173	$ 108,880 [5]
25% Subsidized	$ 41,339	$ 17,362	$ 23,977	$ 5,994 [3]
Hotel Guests				
Convention/Tourists	$7,490,895	$3,146,176	$4,344,719	$3,258,539 [5]
Business	$8,776,425	$3,686,099	$5,090,326	$3,817,745 [5]
Sub Total	$21,432,030	$9,001,455	$12,430,575	$9,214,086
OFF SITE				$4,513,841 [6]
Total				$13,727,927
		Without Specialty Retail Store		
ON SITE				
Workplace				
Hotel	$ 188,656	$ 43,391	$ 145,265	$ 36,316 [3]
Retail	$ 101,460	$ 23,336	$ 78,124	$ 19,531 [3]
Office	$ 5,826,920	$1,340,192	$ 4,486,728	$ 3,078,591 [4]
Parking/Maintenance	$ 12,480	$ 2,870	$ 9,610	$ 2,403 [3]
Residents				
75% Standard	$ 250,299	$ 57,569	$ 192,730	$ 144,548 [5]
25% Subsidized	$ 41,339	$ 9,508	$ 31,823	$ 7,956 [3]
Hotel Guests				
Convention/Tourists	$ 7,490,895	$1,722,906	$ 5,767,989	$ 4,325,992 [5]
Business	$ 8,776,425	$2,018,578	$ 6,757,847	$ 5,068,385 [5]
Sub Total	$22,688,474	$5,218,350	$17,470,116	$12,683,722
OFF SITE				$ 8,488,021

TABLE 3-4

1983
COPLEY PLACE SPIN-OFF GENERATION
(Continued)

1) Table 2-6.
2) Total Annual Expenditure - Copley Place Capture.
3) Estimated at 25%.
4) Contains sales for DSTM goods, estimated at 25% and Eating and Drinking, estimated at 75%.
5) Estimated at 75%.
6) Off-Site sales ($62,954,545) x 7.17%.
7) Off-Site sales ($34,077,650) x 7.11%.

NOTE: This table assumes a fully tenanted and operating project in 1983; the results reflect a full measure of spin-off.
Off-site sales spin-off is estimated at the same rate (7.17%-7.11%) as Copley Place sales originating from other shopping areas (See p. 35).
Back Bay sales capture from Copley Place may be projected at 5% compounded.

The methodology used to estimate the amount of spin-off generated for the Back Bay is shown in Table 3-4. Logically, it is grounded in the same process used to estimate the on-site generated sales within the retail facilities of Copley Place, shown in Table 2-6, and is actually an extension of it. All figures within the table are based on 1983.

Starting with the total annual expenditures generated by the Copley Place daily population made up of residents, employees and guests, double the pro rata share should be retained by project facilities. This amounts to a 42% capture rate for the retail plan with the specialty store and a 23% rate under the plan without the specialty store. The remainder represents the total potential which can be attracted to any retail facility that can conveniently serve this new body of sales potential. Since Back Bay is an established retail center on its own, with a wide range and variety of facilities, its proximity and strong attractive forces should be sufficient to capture significant amounts of sales potential generated from within the components of the on-site population. It should capture a significant portion of the off-site generated sales which would normally be generated by shoppers visiting several retail areas as part of one shopping trip. These multiple-stop shopping trips are especially characteristic of the "specialty" retail centers.

The capture rates for each segment of on-site and the total off-site sales of Copley Place are shown within Table 3-4. It should be noted that different capture rates are assigned to each component depending on the perceived circumstance of the customer and the type of sale expected. Therefore, a smaller capture rate is assigned to DSTM sales generated from subsidized housing residents than is given to those residents generated from the standard market-lease program.

TABLE 3-5

COPLEY PLACE RETAIL SALES
SPIN-OFF BY ORIGIN TO BACK BAY

	With Specialty Retail Store
On-Site	
Workplace	$2,022,928
Residence*	357,303
Hotel Tourist	3,258,539
Business Visitor	3,817,745
Off-Site	4,513,841
Total	$13,970,356

	Without Specialty Retail Store
On-Site	
Workplace	$ 3,136,841
Residence*	394,933
Hotel Tourist	4,325,992
Business Visitor	5,068,385
Off-Site	2,422,921
Total	$15,349,072

* Includes a per capita expenditure of $898 for food store purchases not reflected in Copley Place sales.

NOTE: Increase in sales spin-off from on-site workplace without specialty retail store is due to an increase in the amount of office employment resulting from a revised space allocation without the specialty retail store.

DISTRIBUTION OF COPLEY PLACE SPIN-OFF SALES TO BACK BAY BY STORE TYPE*

With Specialty Store

	Back Bay Spin-Off	Eating & Drinking	General Merchandise	Apparel & Access.	Furniture, Home Furns. & Equipmt.	Drug Stores	Misc. Retail	Food Stores
Work Place	$ 2,022,928	$1,881,438	$ 36,506	$ 36,505	$ 53,897	$ 2,052	$12,530	
Residents	357,303		57,437	24,124	21,826	1,723	9,764	$242,429
Hotel-Tourists	3,258,539	2,280,977	488,781	195,512	195,513	14,663	83,093	
Hotel-Business	3,817,745	2,672,422	572,661	229,065	229,065	17,180	97,352	
Off-Site	4,513,841	541,661	1,986,090	834,158	754,715	59,582	337,635	
Total	$13,970,356	$7,376,498	$3,141,475	$1,319,364	$1,255,016	$ 95,200	$540,374	$242,429

Without Specialty Store

	Back Bay Spin-Off	Eating & Drinking	General Merchandise	Apparel & Access.	Furniture, Home Furns. & Equipmt.	Drug Stores	Misc. Retail	Food Stores
Work Place	$ 3,136,841	$2,935,363	$ 52,897	$ 52,896	$ 76,325	$ 2,724	$ 16,636	
Residents	394,933		76,251	32,026	28,976	2,288	12,963	$242,429
Hotel-Tourists	4,325,992	3,028,194	648,899	259,560	259,559	19,467	110,313	
Hotel-Business	5,068,385	3,547,870	760,258	304,103	304,102	22,808	129,244	
Off-Site	2,422,921	266,521	1,078,200	452,845	409,717	32,345	183,293	
Total	$15,349,072	$9,777,948	$2,616,505	$1,101,430	$1,078,679	$ 79,632	$452,449	$242,429

*1983 Sales

SOURCE: Larry Smith and Company, Ltd.

Back Bay Retail With Copley Place

New sales which would become available to retail facilities in the Back Bay as a result of a stabilized Copley Place project are shown in Table 3-5. In addition to the dollar amounts shown in the generation table (Table 3-4) shown previously, an additional food store expenditure of $898 per capita is added to sales spin-off attributable to the Copley Place residents. The total amount of sales generated to the Back Bay is thus calculated at about $14 million in 1983, under the plan which includes the specialty retail store. Under the alternate plan with less overall retail space, about $15 million in additional sales should be realized by Back Bay retail stores.

The larger amount of sales spin-off generated by the alternate plan without the specialty retail store, results from the addition of about 1,000 office employees as an outcome of the greater amount of office space made available by the reduction of retail space assignment. These employees generate a significant amount of sales to Eating and Drinking establishments in addition to expenditures for DSTM goods. Back Bay's proximate location to the new development provides for convenient capture of this addititonal sales potential.

Table 3-6 provides a breakdown of the most likely distribution of the new sales potential generated from the Copley Place project. The greatest gains should be made in the Eating and Drinking category with about $7.4 million in 1983 with the specialty store plan and $9.8 million under the alternate plan. The categories which stand to achieve the greatest amount of relative increase are:

Eating and Drinking	+23%
General Merchandise	+14%
Furniture, Home Furnishings, Equipment	+30%

TABLE 3-7

BACK BAY RETAIL SALES
WITH COPLEY PLACE
(000)

SIC Code	Kind of Business	With Specialty Retail Store 1983	1985	1990	1995
52	Building Materials	-			
53	General Merchandise Group	$25,778	$28,420	$36,272	$46,293
54	Food Stores	5,081	5,602	7,150	9,125
554	Gasoline Service Station	281	310	396	505
56	Apparel and Accessories	77,968	85,960	109,709	140,020
57	Furniture, Home Furnishings, and Equipment	5,376	5,927	7,565	9,655
58	Eating and Drinking	40,006	44,107	56,293	71,846
591	Drug Stores	5,131	5,657	7,220	9,215
59, ex 591	Miscellaneous Retail	52,937	58,363	74,488	95,068
Total Retail Sales		$212,558	$234,346	$299,093	$381,727

		Without Specialty Retail Store 1983	1985	1990	1995
52	Building Materials	-			
53	General Merchandise Group	$25,254	27,843	35,536	45,354
54	Food Stores	5,081	5,602	7,150	9,125
554	Gasoline Service Station	281	310	396	505
56	Apparel and Accessories	77,750	85,719	109,402	139,628
57	Furniture, Home Furnishings, and Equipment	5,200	5,733	7,317	9,339
58	Eating and Drinking	42,408	46,755	59,673	76,160
591	Drug Store	5,116	5,640	7,198	9,187
59, ex 591	Miscellaneous Retail	52,849	58,266	74,364	94,909
Total Retail Sales		$213,939	$235,868	$301,036	$384,207

SOURCE: Larry Smith and Company, Ltd.
NOTE: Estimated by adding Back Bay retail sales without Copley Place (Table 3-3) to Copley Place spin-off to Back Bay (Table 3-6).

Apparel and Accessories, Drug Stores and Miscellaneous Retail would increase sales by less than 3% as a result of spin-off from the Copley Place project.

Table 3-7 shows total projected sales in the Back Bay with a fully stabilized Copley Place project.

Retail Rent Levels

There are two basic components for determining the level of rent for retail space. The first component is derived from the productivity which could be anticipated from the retail activity planned for the site. Recent experience shows that rents in new retail facilities range in the area of 10-12% of total expected sales. The second component of rent level is the result of the forces of supply and demand. Both competing retail establishment and alternate uses might influence the degree of competitiveness experienced. A further consideration relating to the relative supply of retail space would be the cost of adding new space to the market. The cost of constructing new space now runs on the order of $30 to $50 per square foot. The high cost of new space creates upward pressure across the entire rental range of the retail market.

Modern retail rents consist primarily of two major elements: A guaranteed rent level and a percentage rent which is calculated as a percentage of sales. In addition, modern retail leases provide for "passing through" nearly all expenses of operation to the tenant.

Table 3-8 shows sampled rents for retail space in the Back Bay area. The information presented was obtained from the BRA Research Department, Back Bay Federation, and from interviews with real estate brokers

TABLE 3-8

SAMPLED RENTS FOR RETAIL SPACE
IN SELECTED AREAS OF BACK BAY BOSTON

	1979 Rent Levels Per Sq. Ft.	1983 Rent Levels Per Sq. Ft.	1985 Rent Levels Per Sq. Ft.
BOYLSTON STREET			
Arlington to Dartmouth (350-607)	$15.75 - $21.00	$19.15 - $25.50	$21.10 - $28.15
Dartmouth to Fairfield (607-691)	$12.60 - $15.75	$15.30 - $19.15	$16.90 - $21.10
Prudential Center Mall (1850+)*	$10.50 (unfinished)	$12.75 (unfinished)	$14.05 (unfinished)
	$15.75 (finished)	$19.15 (finished)	$21.10 (finished)
NEWBURY STREET			
Arlington to Berkeley (1-50)	$21.00	$25.50	$28.15
Berkeley to Dartmouth (51-150)	$15.75	$19.15	$21.10
Exeter Towers-Retail Space	$15.75 (unfinished)	$19.15 (unfinished)	$21.10 (unfinished)
Exeter Towers-Retail Space	$17.85 - $21.00	$21.70 - $25.50	$23.90 - $28.15
BOYLSTON STREET**			
Arlington to Berkeley	$21.00 - $26.25	$25.50 - $31.90	$28.15 - $35.15
Prudential Center	$18.45 - $22.65	$22.43 - $27.53	$24.73 - $30.35
NEWBURY STREET**			
Near Arlington	$15.75	$19.15	$21.10
Near Hereford	$16.80	$20.40	$22.50
Near Massachusetts Ave.	$10.50	$12.75	$14.05

SOURCE: Larry Smith and Company, Ltd.
*NOTE: Unfinished rent levels are for shell space only.
NOTE: Prudential Center Mall - includes $5.85 added to stated rent levels for taxes, maintenance and common area charges, in 1979.
**Information provided by the Back Bay Federation.

DCD-82

operating in the Back Bay. Projections are made by increasing rentals at the rate of 5% compounded annually. Retail rent levels are projected at this 5% rate to reflect the expected increase in retail sales projected throughout this report for the metropolitan area.

The quoted rents along Boylston and Newbury Streets reflect price per square foot of gross leasable area. Rents typically include base year taxes and operating expenses with the tenant paying for electricity plus operating cost and real estate tax escalation. Unit rentals in Prudential Center Mall for unfinished space are for shell space only as the tenant must provide interior finish, fixtures and heat and air-conditioning circulating equipment.

The anticipated rent structure in Copley Place has already been discussed to some extent in Section I of this report. The sampled rent data shown in Table 3-8 are for "areas" or segments of streets which include a range of rents. This is relatively general data when compared with the specific occupancy costs projected for Copley Place by store type on page 3. The sampled rents are for small shops predominantely, are more likely to represent total occupancy (have fewer passed through costs), and are not indicated to have any percentage rent element. All of these elements preclude making direct comparisons with the Copley Place occupancy cost levels. Because of the complexity of the project, the higher cost of construction due to inflation, and the assumed character of the project, it is likely that the Copley Place facilities will require higher occupancy costs than other Back Bay existing facilities with the exception of a few new developments.

The concept of Copley Place is that of a specialty retail complex consisting of unique and highly interesting stores of a type not now generally

existing in the Boston Area. Therefore, the stores attracted to Copley Place must be capable of fulfilling this general prescription as well as:

1) satisfy the specific leasing requirements of the Copley Place retail plan in regards to type of store, size, layout and availability of space;
2) be capable of generating and maintaining an intense volume of sales per square foot as indicated in the description of anticipated sales for Copley Place Mall shops in Section 1;
3) exhibit a sound record of financial stability and responsibility.

The scope of field work undertaken for this analysis did not include a detailed store-by-store evaluation of the likelihood of individual establishments relocating from Back Bay to Copley Place. However, based on general observations and discussions with the Back Bay business community, it is not judged that many Back Bay establishments are likely to relocate within the Copley Place project. However, this does not foreclose the possibility that individual management decisions will result in some transferral of stores from Back Bay to Copley Place.

Back Bay has many fine specialty stores which have achieved a high identity and association with the area and seem to be operating quite successfully. With this strong association in mind, most should prefer to remain in Back Bay.

Transfers which did take place would have such small impact, given the total size of Copley Place retail measured against existing facilities in Back Bay, that their relocation would have an indiscernible effect on the retail organization now in place in the Back Bay area. The continuing development of new stores in Back Bay attests to the attractiveness of the location.

Market Independence

About 15% of the Copley Place off-site sales are estimated to come from the City of Boston other than employee-generated sales from Back Bay and the CBD. The remainder of metropolitan Boston generates about 69%. Within that 69% disproportionate shares are expected to come from the West Sector, the Northwest Sector and the Northeast. These are the corridors in which income is significantly higher than the metropolitan area average. The weighting given to income in anticipating the origin of sales is a reflection of the assumption that the Copley Place facilities will feature stores, merchandise and an environment trending well above the average.

Copley Place will serve the same market areas which are served by the other Back Bay facilities which are merchandised to the same economic markets. The major difference is expected to come in the market penetration by Copley Place. The customer surveys taken on Newbury Street indicate that about 43% of the persons interviewed came from the City of Boston. At the same time, the median household income of the Newbury Street respondents was the highest of any of the shopping areas. Since the City of Boston has a relatively low per capita income, this suggests that the Newbury Street facilities are penetrating the nearer-by high-income parts of the City and suggests a relatively limited market area. Copley Place will reflect the characteristics of a specialty center. It is anticipated that because of the combined attraction of the stores and facilities at Copley Place, the retail draw will be much broader, covering the entire metropolitan area and beyond, although the penetration will be relatively thin over this broad market.

Copley Place and the other Back Bay facilities will also share the market generated by the employees and the visitors to Back Bay. It

is likely that the clothing purchases of employees will tend to be expended in the less expensive shops outside of Copley Place. Again, this will be a reflection of income levels and the pricing characteristics of the stores. The retail facilities developed along street-side in Back Bay represent a considerably wider spectrum of price-level presentation than would be anticipated in Copley Place. The upper priced shops and service facilities and restaurants in Back Bay will probably tend to benefit more from cross-shopping with Copley's metropolitan area customers in higher income brackets.

It is estimated that about 7% of the sales generated by shoppers at Copley Place from off-site will be transferred to other inner city shopping facilities. This estimate is derived from the Boston shopper surveys conducted by the BRA and shown previously in Table 2-7 and Table 2-8.

As there is no available data to relate the number of "shoppers" to the number of "buyers" or even an average purchase figure which would allow a more precise estimate of transfer, the 7% figure is judged to be the best available indicator of the interaction among the major retail facilities within inner-city Boston. In addition, the type of retail shopper likely to be attracted to Copley Place should be more closely matched in profile to the type attracted to the better quality shops offered on Newbury Street and the Back Bay than to those attracted to the CBD. Therefore, the full 7% share is directed from Copley Place to the shopping facilities at Back Bay (Table 3-4).

If Copley Place takes on the aspect of a "special happening" which could result from its project design and the character of its decor and tenants, the performance of the project and the subsequent amount of spin-off to outside facilities could increase in proportion to the excess of performance over current estimates. This cannot be predicted, but such a possibility would result in the development of a larger market for all Back Bay retail facilities.

TABLE 4-1

AVERAGE 1963 DAILY VEHICLE FLOW

Location	Estimated 24-Hour Volume
Mass. Avenue @ Huntington	36,000
Mass. Avenue @ Columbus Avenue	36,000
Columbus Avenue @ Mass. Avenue	18,000
Columbus Avenue @ Dartmouth	15,000
Dartmouth @ Stuart	10,000
Tremont @ Dartmouth	15,000
Clarendon @ Columbus	5,000

SOURCE: 1968/1969 Transportation Facts, Boston Redevelopment Authority p. 93.

SECTION IV

COPLEY PLACE IMPACT ON SOUTH END RETAIL

The South End as referred to in this analysis is a Boston neighborhood of about one square mile, also referred to by The Boston Redevelopment Authority as the South End Urban Renewal Area, R-56. The South End is immediately adjacent to Back Bay and is generally bordered by the New Haven Railroad on the north and east, Sterling Street on the west and the Fitzgerald Expressway to the southeast. Copley Place is located almost on the northeast corner of the South End area and is generally separated from South End by the depressed New Haven Railroad tracks. The South End extends about a mile from Copley Place to the opposite boundaries of the neighborhood.

Locational Relationships

The South End extends eastward to the edge of the central business district (CBD) and is traversed by a number of major streets leading to that part of Boston lying to the southeast. The most important of these traffic arteries are Columbus Avenue, Tremont Street, and Washington Street. Massachusetts Avenue, Dartmouth Street and Clarendon Street provide cross access between the major arteries leading to downtown. The significance of these streets is reflected in the data in Table 4-1.

Access from the South End to the Copley Place location is inhibited by the interruption of cross streets by the depressed New Haven Railroad tracks. Dartmouth Street provides vehicular access across the tracks to the northeast of Copley Place. The next street which bridges the railroad to the west is West Newton Street five blocks to the west of Dartmouth Street.

South End Retail Development

The existing retail facilities in the South End have developed along the major thoroughfares: Tremont Street, Washington Street, Columbus Avenue and Massachusetts Avenue. The frontages of these four streets are estimated to have about 100 retail establishments. These businesses are predominately neighborhood oriented and include food, drug and hardware stores, some general merchandise and variety, and a few apparel shops. Eating and drinking places make up about one third of the total retail establishments. In addition to the retail units, there is a significant development of service establishments, primarily beauty and barbershops. Most of the facilities are shops tucked into residential buildings or converted buildings which are adapted to walk-in neighborhood traffic. The units are small and generally not up to competitive standards of modern retailing.

The existing retailing in the South End appears to be directly related to the immediately available neighborhood market support. The population of the South End is about 25,000 persons. "Nearly two thirds of the South End's households are at the low end of the income scale with annual incomes under the $10,000 neighborhood average --- only one household in 25 has an annual income of $30,000 or higher."*

Avenues of Impacts

The impacts of Copley Place on South End retail will be transmitted through the movement of persons and vehicles to and from Copley Place over the South End streets. These impacts will be affected by the amount of traffic, primarily the change in traffic due to the development of Copley Place, and the exposure of South End facilities to the traffic.

* Report of Findings, 1978 Urban Renewal Survey of the South End, Consensus, Inc., April 1979, p. 144.

TABLE 4-2

AVERAGE DAILY VEHICULAR TRAFFIC
GENERATED BY COPLEY PLACE

	1983 ADT*	Preferred Program	Optional Program	% Change Preferred Program	% Change Optional Program
Dartmouth Street					
Appleton-Stuart	15,500	216	221	+1.4%	+1.4%
Columbus-Stuart	15,000	425	473	+2.7	+3.0
Columbus Ave.					
W. Newton-Dartmouth	17,100	27	30	+ .2	+ .2
W. Newton-Mass.	15,000	478	531	+3.2	+3.5
Appleton Street					
Dartmouth-Tremont	2,140	44	49	+2.1	+2.3
Warren Street					
Columbus-Dartmouth	2,900	22	24	+ .8	+ .8
Berkeley-Dartmouth	3,200	44	49	+1.4	+1.5
W. Newton Street					
Columbus-St. Botolph	5,400	193	215	+3.6	+4.0
Berkeley Street					
Tremont-St. James	12,800	22	24	+ .2	+ .2
Mass. Ave.					
Columbus-St. Botolph	28,900	210	234	+ .7	+ .8
St. Botolph					
Mass. Ave.-W. Newton	4,300	57	64	+1.3	+1.5

SOURCE: Urban Investment and Development Co., Traffic Data.
Norman A. Abend, Traffic and Transportation Consultant.
* Average Daily Traffic.

Vehicular Traffic

The situation of South End relative to the mass of the City's population and the CBD has exposed the area to very high levels of vehicular traffic over a considerable period of time. The average 1963 daily vehicular traffic over the more important streets in the South End is shown on the 24 hour volume basis in Table 4-1. More current traffic volumes for the South End streets are shown in Table 4-2 along with the changes which it is estimated that Copley Place will generate. The maximum change in traffic volume is estimated to be about 4% added volume.

Pedestrian Traffic

It is estimated from the Copley Place traffic studies that about 40% of the Copley Place employees who walk to work daily will pass through parts of the South End, 20% along West Newton Street and 20% along Dartmouth. This 40% represents 320 persons for Plan A and 360 persons for Plan B.

In addition to employees, 10% of the non-employee pedestrian traffic will travel along Dartmouth Street in the South End. This 10% represents 430 persons for Plan A and 310 persons for Plan B.

The maximum number of pedestrians affecting the South End daily is 750 resulting from Plan A.

In order to evaluate the impact of the pedestrian traffic created by Copley Place through the South End, the per capita retail expenditures in store types which it is judged would be most likely the result of this pedestrian traffic, are used along with the pedestrian traffic to calculate the sales potential and subsequently the amount of supportable space by store type related to the pedestrian traffic. It should be noted that this is a maximum estimate. The number of pedestrians used in the estimate, 750, is the maximum combination of employees

and non-employee pedestrians. The per capita sales figures, used actually as expenditure, are related to the Boston metropolitan area expenditure pattern and consequently, the metropolitan area income characteristics. The income factor probably introduces an over statement of about 30% for the employee part of the pedestrian traffic which amounts to almost half of the total. The employee pedestrian traffic is also expected to be divided between Dartmouth Street and West Newton Street which would tend to dissipate the impact of the pedestrian traffic.

Probable Impacts

The South End neighborhood does not generate within itself sufficient potential to support significant additional retail development. The character of the facilities which are proposed for Copley Place will have no discernible competitive impact on the retail facilities which exist or which might be developed in the South End. Copley Place, with its location at the extreme edge of the South End, is not in a location to provide maximum convenience for the major portion of South End residents.

The order of magnitude of the anticipated increase in vehicular traffic which will affect the South End as a result of Copley Place development is so small compared to the basic traffic volumes to which South End has been exposed over a long period of time, that it is unlikely that any discernible impact on retail sales will be generated from this increase.

The most probable impact on South End retailing would be from the pedestrian traffic generated by Copley Place. In view of the distances involved it is likely that most of the pedestrians will tend to originate from that part of the South End closest to Copley Place. Potential impacts will be on retail facilities along Dartmouth Street. The area of highest probable impact would be the intersection of

TABLE 4-3

SOUTH END RETAIL SPACE
SUPPORTABLE BY COPLEY PLACE PEDESTRIANS, 1985

Store Type	Per Capita Sales (1	Sales Potential (2	Supportable Space (sq. ft.) (3
Hardware	$ 27	$ 20,250	253
Variety	$ 30	$ 22,500	281
Misc. Gen. Merchandise	$ 71	$ 54,250	666
Grocery	$724	$543,000	5,430
Eating Places	$355	$266,250	3,328
Drug	$118	$ 88,500	1,160

1) Average Annual Per Capita Sales, Boston SMSA, 1977 Census of Retail Trade, Bureau of the Census, projected @ 5% annual increase to 1985.
2) Maximum combined employee and non-employee pedestrian count for South End, Plan A (750) from traffic estimates.
3) Assumes space can be supported at $80 per square foot sales for all types except food. Food based on $100 sales per square foot.

Dartmouth Street and Columbus Avenue and along Dartmouth Street from Columbus Avenue to Copley Place. The potential impact on the sales which could be generated by increased pedestrian traffic is relatively minor. The sales potential estimates shown in Table 4-3 are not high enough to induce store development in any one of the types indicated.

The most likely impact on South End retailing will be the possibility of generating some convenience goods facilities along Dartmouth Street or near Columbus Avenue and Dartmouth Street. These facilities will probably relate more to the needs of South End resident employee pedestrians and will probably be of such small magnitude that it will be difficult to identify the development as the effect of Copley Place. The probable impacts of Copley Place on South End retailing are not of a magnitude which could create an identifiable change on retail rents or retail operations in the South End.

ADDENDUM

EMPLOYMENT GOAL IMPACT

The long term air rights lease on the Copley Place site between UIDC and the Massachusetts Turnpike Authority includes a goal to have 50% of the employees in Copley Place be residents of the City of Boston. The impact of this goal on the distribution of Copley Place sales is evaluated in the following analysis.

The data utilized are drawn from Tables 2-4 and 2-6. The sales data are for 1983.

The analysis assumes that the goal is 100% effective and therefore demonstrates maximum impact.

The total Copley Place sales generated by employees of all types, Plan A, is $2,046,672 (Table 2-6), say, $2 million. Assuming 100% effectiveness of the employment goal and equal distribution of employees by type of work, Boston residents would contribute 50% or $1 million of these on-site sales.

If Boston contributed to the Copley Place work force strictly in proportion to its share of the SMSA population (671,000/2,927,000), 23% of the Copley Place employee generated sales, $460,000, would originate from Boston.

The accomplishment of the employment goal would approximately double the contribution of Boston residents to the on-site sales.

The total Copley Place sales from Boston are the sum of on and off site sales. The increase in sales on-site will decrease the off-site contribution and decrease the share of off-site sales contributed by Boston in Table 2-4. The total Boston share in Table 2-4 is 16% which includes .8% generated by employees in downtown and Back Bay. The resident Boston contribution is, therefore, 15.2% of the $62 million off-site sales, or $9.4 million. The $0.5 million increase from accomplishment of the employment goal would decrease Boston's off-site contribution by 5%, or 0.8 percentage points in Table 2-4. The contribution of off site Boston sales would decline from 15.2% to 14.4%. The shares of the other SMSA subdivisions in Table 2-4 would increase proportionately on an average of 0.13 percentage points.

ADDENDUM II

This addendum is submitted in response to additional questions put forth to the consultant by the Boston Redevelopment Authority in the letter dated 12th of December, 1979.

A. ADDITIONAL BACKGROUND AND EXPLANATION OF TABLE 2-4 AND TABLE 2-8

Regarding questions relative to distributions in Table 2-4 and Table 2-8, it must be clearly understood what each table represents. The following should provide additional background and explanation for the tables in question.

The distribution of Off-Site Sales By Location Of Origin (Table 2-4) in Metropolitan Boston was estimated on the basis of DSTM sales potential. DSTM is a designation for a range of goods considered to be comparison goods or department store type merchandise. These goods are normally purchased only after comparison of quality and price. These goods are usually found in the normal array of store types found in a modern shopping center and are characteristic of department stores.

DSTM sales potential reflects both population and income as they are currently distributed in the metropolitan area. Adjustments were made in Table 2-4 to specific areas which have a particularly high income to reflect the special character of merchandise assumed to be offered in Copley Place shops. Detailed explanation of Table 2-4 can be found in the discussion of Origin Of Sales By Location, pages 11-14.

Three components are incorporated into the assignment of shares in Table 2-4. Downtown Boston shopper surveys are used to establish the percent

of sales (85%) originating from the metropolitan area. A survey of Boston's Downtown office employee expenditures is used along with resident expenditure to estimate the share of sales for Back Bay and Central Boston. Resident DSTM expenditure potential is then applied to the metropolitan traffic sectors, i.e., Northeast, North, Northwest, West, Southwest, Southeast, to estimate the percent of sales in Metropolitan Boston, excluding the City of Boston. The outcome of this methodology is a detailed allocation of the sales potential by location of origin for shopping goods, or DSTM, for Copley Place.

Table 1-3 shows an estimate of sales distributed by store type/establishment type in Copley Place. The DSTM or shopper's goods represent 71% of the total sales in Plan A and 60% in Plan B. Sales in the store/establishment categories (Table 1-3), Restaurants and Entertainment, Service, Cinema, Health Club, Community Retail, amount to $21.1 million or 29% in Plan A and $15.6 million, or 40%, in Plan B. Detailed analysis of the non-DSTM categories has not been a consideration in Table 2-4.

The non-DSTM space at Copley Place is intended to add variety and additional character to increase the shopper attraction of Copley Place. Each use would generate an individual market. The restaurants would cater to the users of the two project hotels, the office employees on-site, the employees in adjacent Back Bay and to some extent, the metropolitan area shoppers. Service establishments would most likely draw from the on-site population and, to a limited extent, the employee population in Back Bay. Community Retail would have only a local market and, depending on its final project location and store content, draw primarily from residents on-site and from the immediate residential area. The description of the project

concept, pages 1-2, implies that Cinema and Health Club will both be readily accessible to the two project hotels. Cinema operation also offers a convenient entertainment facility to city residents. The Health Club is designated for membership use. This implies daytime office employee and an evening city resident market.

Each of the non-DSTM uses in Copley Place, while varied in function and somewhat independent of the DSTM shopper attraction, is generally oriented to downtown users. Since an independent assessment of non-DSTM activity is not available for this analysis, judgement of these factors, as described above, is based on the information provided by the developer and consultant understanding of the project concept.

Table 2-8, Distribution Of Copley Place Sales By Origin, is discussed on pages 18-19. The basis for this distribution is the Downtown Boston Shoppers Surveys. The exact distributions in Table 2-8 reflect samples of sidewalk traffic. The respondents to these shopper surveys were not required to be actively shopping at the time of the survey. Therefore, these shopper surveys do not establish a direct corelation with sales at Copley Place. The shoppers surveys provide, however, the only tool available for making the required estimate.

Therefore, Table 2-4 and Table 2-8, viewed in the light of what each represents, are considered to be both accurate and consistent. The non-DSTM customers of Copley Place facilities are likely to be heavily weighted by Downtown Boston users. The non-DSTM uses should account for 29% of the total sales at Copley Place. The fact that many of the non-DSTM customers are likely to originate from workplace is reflected in the Workplace designation in Table 2-8. Table 2-8 exhibits the profile of total Copley Place sales from all users of project facilities. Furthermore, Table 2-4 is valid in that it reflects a reasonable distribution of sales potential for upper income shopping goods at a high quality specialty center.

B. METHODOLOGY OF TABLE 3-6

Table 3-6, Distribution Of Copley Place Spin-Off Sales To Back Bay By Store Type is shown on page 29. The table demonstrates a likely distribution of the sales potential spin-off from Copley Place to Back Bay to the following categories of retail stores: Eating and Drinking, General Merchandise, Apparel and Accessories, Furniture-Home Furnishings-Equipment, Drug Store, Miscellaneous Retail and Food Stores.

The distribution of potential spin-off is based on data accumulated in Table 2-6, Table 3-4, and Table 3-5. In these tables specific sales potential is accumulated for DSTM and Food-Drink expenditures (Table 2-6) from the on-site population and a share of the off-site expenditures (Table 3-4) at Copley Place. Estimates are made in Table 3-4 for 1) portion which is captured by facilities in Copley Place and 2) share of potential captured by facilities in Back Bay. Spin-off by origin is established in Table 3-5. Table 3-6 distributes the spin-off potential. The methodology used to establish the distribution pattern is as follows:

1) Establish DSTM potential for each type within the On-Site Population. Table 2-6 shows the origin of each type. In Table 3-4 the Back Bay portion is established by: Total Annual Expenditure minus Copley Place Capture equals Copley Place Spin-Off; Copley Place Spin-Off times the rate of Back Bay capture equals Spin-Off to Back Bay.

2) Establish Eating and Drinking Spin-Off for each type within On-Site Population: Total Back Bay Spin-Off minus DSTM Spin-Off equals Spin-Off for Eating and Drinking. Since spin-off is accumulated from DSTM sales and Food-Drink sales from on-site population, Eating and Drinking potential is equal to the total minus the DSTM sales.

3) Establish the amount of Eating and Drinking Spin Off from Off-Site Spin Off. (See discussion of Off-Site Sales, pages 18-19 and Table 2-8). From Table 1-3, Restaurant and Entertainment sales equal $8.8 million of the total Copley Place sales in 1983 of $71.9 million. This represents about 12% of total sales. Assuming restaurants and entertainment sales from off-site are proportional to total restaurant and entertainment sales, 12% of Off-Site Spin Off to Back Bay is assigned to Eating and Drinking.

4) Establish the amount of spin-off for each retail store type in Back Bay. DSTM potential for each on-site population type is individually-distributed along the same lines as they were accumulated. (See discussion of Office Employee Expenditures, pages 13-14 and On-Site Sales, pages 15-18 and footnotes to Table 2-6). These distributions show:

a. Hotel and Parking/Maintenance Employee DSTM Expenditure

50% - Furniture-Home Furnishings-Equipment

50% - Miscellaneous DSTM. This category is further distributed 15% Drug Stores and 85% Miscellaneous Retail.

b. Office and Retail Employee DSTM Expenditure

65% - Apparel and Accessories further distributed 50% to General Merchandise and 50% to Apparel and Accessories stores.

35% - Furniture-Home Furnishings-Equipment

c. Residents DSTM Expenditure

50% - General Merchandise

21% - Apparel and Acessories

19% - Furniture-Home Furnishings-Equipment

10% - Other - further distributed 15% Drug Store and 85% Miscellaneous Retail, as above.

*All residential food sales are assigned to Food Stores.

d. Hotel Tourists DSTM Expenditure

50% - General Merchandise

20% - Apparel and Accessories

20% - Furniture-Home Furnishings-Equipment

10% - Other - further distributed 15% Drug Store and 85% Miscellaneous Retail, as above.

e. Hotel Business DSTM Expenditure

50% - General Merchandise

20% - Apparel and Accessories

20% - Furniture-Home Furnishings-Equipment

10% - Other - further distributed 15% Drug Store and 85% Miscellaneous Retail, as above.

f. Off-Site DSTM Sales

50% - General Merchandise

20% - Apparel and Accessories

20% - Furniture-Home Furnishings-Equipment

10% - Other - further distributed 15% Drug Store and 85% Miscellaneous Retail, as above.

The distribution of DSTM sales detailed above are based upon 1) consultant judgement of the nature of each source of DSTM sales, 2) sales distribution by store type in large regional shopping centers and 3) retail sales distribution shown in the 1977 Census of Retail Trade for Massachusetts.

The following questions and answers are included to further analyze the impact on Back Bay of the Eating and Drinking spin-off resulting from the Copley Place project.

i - Q. What percent of Eating and Drinking spin-off sales will be absorbed by Copley Place hotels?

A. The size allocation for Copley Place hotel restaurant facilities is not fixed. However, information available from the hotel developers suggests that upwards of 45,000 square feet of total restaurant space may be incorporated into the two hotels. The square footage is estimated from the seating capacity discussed by the individual developers.

The size allocation for restaurants in the mall at Copley Place has likewise, not been finally determined. In lieu of a developer determined figure, the consultant uses an assumption of 20,000 square feet.

Assuming that the two restaurant space figures described above are correct, it is estimated that $1.7 million in Eating and Drinking spin-off sales may be absorbed in Copley Place hotel restaurants in accord with the following analysis for Plans A and B respectively.

1) The Eating and Drinking expenditure is determined in Table 3-6 from Off-Site sources at $541,661 and $266,521.

(See explanation Section A). Residents contribute no spin-off to Eating and Drinking; Hotel Tourists and Hotel Business visitors contribute sizeable amounts to Eating and Drinking but al of this expenditure is directed to restaurants outside of hotel restaurants (Table 2-6, footnote 7); Workplace contributes $1,881,438 (Plan A) to Eating and Drinking and $2,935,363 (Plan B). Therefore, the total amount which is available for capture by restaurants in the project hotels is $2,423,099, or $3,201,884.

2) If restaurants in Copley Place hotels equal 45,000 square feet and Copley Place restaurant space is 20,000 square feet, the pro rata share for Copley Place hotel restaurants is 69%.

3) Copley Place hotel restaurant share of the potential is esti mated at $1,671,938 or $2,209,300.

ii - Q. What percent of Eating and Drinking spin-off sales will actually go to Back Bay?

A. Assuming that restaurant space in Copley Place hotels absorb the spin-off indicated in Q. i, then the total amount of Eating and Drinking spin-off is equal to $7,376,498 minus $1,671,938 or $5,704,560 (Plan A) or $9,777,948 minus $2,209,300 equals $7,568,648 (Plan B).

iii - Q. What is the breakdown of the time of day of the impact?

A. After allocating 69% of Eating and Drinking sales to Copley Place hotel restaurants, the following distribution of Eating and Drinking spin-off could be realized in Back Bay.

EATING AND DRINKING SPIN OFF TO BACK BAY BY SOURCE
BY TIME OF DAY
(000-$)

Plan A

	Total	Morning		Noon		Evening	
		%	$	%	$	%	$
Work Place	$ 583	-	-	90	$ 525	10	$ 58
Hotel-Tourists	2,280	25	$ 570	25	570	50	1,140
Hotel-Business	2,672	25	668	25	668	50	1,336
Off-Site	168	-	-	50	84	50	84
Total	$5,703		$1,238		$1,847		$2,618

Plan B

	Total	Morning		Noon		Evening	
		%	$	%	$	%	$
Work Place	$ 910	-	-	90	$ 819	10	$ 91
Hotel-Tourists	3,028	25	$ 757	25	757	50	1,514
Hotel-Business	3,548	25	887	25	887	50	1,774
Off-Site	83	-	-	50	42	50	42
Total	$7,569		$1,644		$2,505		$3,421

SOURCE: Larry Smith and Company, Ltd.
Basic Data from Table 3-6.
NOTE: Totals may not add due to rounding.

iv - Q. What is the quality mix of Eating and Drinking spin-off?

A. Within the categories indicated in Q iii, it is assumed that all are of moderate to high income.

v - Q. What percent of the spin-off can be absorbed by existing restaurants?

A. The detail necessary to respond to this question is not available to the consultant. It is not known how much restaurant space is presently operating in the Back Bay, nor is it known what level of productivity prevails. However, it is possible that an intensification of restaurant use could have the result of absorbing all of the spin-off generated by Copley Place.

vi - Q. If restaurants which are presently closed during lunch were open for that period, how would this accommodate some of the anticipated demand?

A. The lack of information regarding operating schedules in Back Bay restaurant facilities precludes any substantive response to this question.

vii - Q. How much new restaurant and bar space would be generated to absorb any excess demand for Eating and Drinking?

A. Assuming the possibility raised by the answer to question v is not realized, then the amount of new space generated would equal the total amount of spin-off divided by the productivity level of restaurant facilities of comparable quality to the Back Bay standard. Otherwise none.

REFERENCES

Back Bay Retail Market, Boston Redevelopment Authority, September 1978.

Boston's Employment Recovery - The Largest Industrial Jobs Gain in a Quarter Century, Research Department, Boston Redevelopment Authority, April 1978.

Boston & The Flight to the Sunbelt, Research Department, Boston Redevelopment Authority, October 1976.

Boston: The Livable City, BRA Research Dept. and Public Information Office, Boston Redevelopment Authority.

Boston's New High-Rise Apartments: A Study of the Residents and Their Preferences, Research Department, Boston Redevelopment Authority, January 1974.

Boston's Office Market - A Brief Look at Construction and Vacancy Levels, Research Department, Boston Redevelopment Authority, August 1978.

The Prudential Center, Part One: Its Direct Impact on Boston, Research Report, Boston Redevelopment Authority, September 1969.

The Prudential Center, Part Two: Its Effect on the Surrounding Area, Research Report, Boston Redevelopment Authority, December 1969.

Boylston and Newbury Streets - Shoppers' Profile, Research Department, Boston Redevelopment Authority, February 1978.

1970 Census of Population and Housing, Boston, Mass. Standard Metropolitan Statistical Area (and Adjacent Area), U.S. Department of Commerce, Bureau of the Census, May, 1972.

Characteristics of Population: Families and Households, and Their Levels of Income, for the City of Boston and the Metropolitan Area, 1960 and 1970 Actual, and 1980 and 1985 Projected, Research Department, Boston Redevelopment Authority, August 1974.

Copley Place - Summary of Workshops, Massachusetts Turnpike Authority and the Office of State Planning, August 11, 1978.

Copley Square - Final Recommendations, Massachusetts Turnpike Authority and the Office of State Planning, September 22, 1977.

1972 Census of Retail Trade, Area Statistics, Massachusetts, U.S. Department of Commerce, Bureau of the Census, August 1974.

REFERENCES (con't)

1972 Census of Retail Trade, Major Retail Centers in Standard Metropolitan Statistical Areas, Massachusetts, U. S. Department of Commerce, Bureau of the Census, January 1975.

Current Population Reports - Population Estimates and Projections, Series P-25, No. 669, U.S. Department of Commerce, Bureau of the Census, May 1977.

Faneuil Hall Marketplace: The Differential in City and State Tax Yield, Research Department, Boston Redevelopment Authority, August 1978.

New Retail Space in Downtown Boston, Research Department, Boston Redevelopment Authority, 1973.

Mid-Decade Estimates of Population of Boston, By Neighborhood, By Age Group, Research Department, Boston Redevelopment Authority, September 1977.

Pedestrian Study, Back Bay Federation for Community Development, August, 1978.

The Office Industry Survey, Interim Report, Research Department Boston Redevelopment Authority, September 1977.

Residential Property Market Values in Boston, Research Department, Boston Redevelopment Authority, 1973.

Hotel and Convention Center Demand and Supply in Boston - Past, Present and Future, Boston Redevelopment Authority, October 1978, unplub.

Subsidized Housing in the South End, Boston Redevelopment Authority, April 1974, September 1978.

A Survey on Downtown Boston's "Captive" Retail Market of Office Employees and New High-Rise Apartment Dwellers: Where They Shop and Why, Research Department, Boston Redevelopment Authority, 1975.

Retail Trade in Boston: Recent Trends and Future Potential Background Tables, Research Department, Boston Redevelopment Authority, July 1975.

1968/1969 Transportation Facts, Boston Redevelopment Authority, September 1968.

What are the Planning Priorities? A Comparative Analysis of Proposed Development Projects in the City of Boston as of April 1978. Research Department, Boston Redevelopment Authority.

REFERENCES (con't)

1978 Urban Renewal Survey of the South End, Consensus, Inc, April 1979.

Hotel and Convention Center Demand and Supply in Boston -- Past, Present and Future, Boston Redevelopment Authority Research Dept., March 1979.

Boston Conventions, Greater Boston Convention & Tourist Bureau, January 1979.

Subsidized Housing in the South End, Boston Redevelopment Authority, September 1978.

A Decade of Development in Boston, Research Department, Boston Redevelopment Authority, May 1979.

Expanding Boston's Convention Facilities, Planning Department, Boston Redevelopment Authority, April 1979.

Back Bay-Beacon Hill-Bay Village, District Profile and Proposed 1979-1981 Neighborhood Improvement Program, Neighborhood Planning Program, Boston Redevelopment Authority, 1979.

Fenway-Kenmore - District Profile and Proposed 1979-1981 Neighborhood Improvement Program, Neighborhood Planning Program, Boston Redevelopment Authority, 1979.

1977 Census of Retail Trade, Geographic Area Series, Massachusetts, U.S. Department of Commerce, Bureau of the Census, April 1979.

The Outlook for Boston: Development in the 80's, City of Boston, BRA, September 1979.